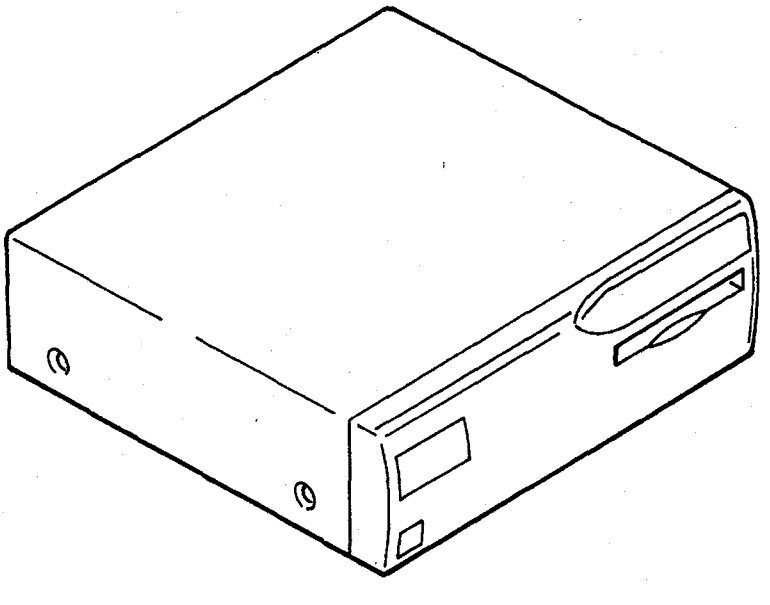
SONY

COLOR VIDEO PRINTER

UP-5600MD
UP-5600MDP

UPK-5500
UPK-5501NP
UPK-5502SC

SERVICE MANUAL



SAFETY RELATED COMPONENT WARNING

Components identified by shading and ⚠ marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

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SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. SPECIFICATIONS

Power requirements
- UP-5500/5600MD: 120 V AC, 50/60 Hz
- UP-5600MDP: 220 to 240 V AC, 50/60 Hz

Power consumption
- UP-5500/5600MD: About 2.8 A max. at 25°C, 120 V AC
- UP-5600MDP: About 1.2 A max. at 25°C, 240 V AC

Operating temperature
- 5°C to 35°C (41°F to 95°F)

Operating humidity
- 20 % to 80 % (no condensation allowed)

Storage and transport temperature
- -20°C to 60°C (-4°F to 140°F)

Storage and transport humidity
- 20 % to 90 % (no condensation allowed)

Dimensions
- About 424 × 124 × 475 mm (w/h/d) (16¾ × 5 × 18¾inches)

Mass
- About 14 kg (30 lb 14 oz)

Printing system
- Sublimination heat transfer printing

Thermal head
- In NTSC mode: 5.6 dot/mm (512 dots)
- In PAL mode: 6.72 dot/mm (608 dots)

Total gradation
- 256 levels each for yellow, magenta, and cyan

Printing time
- Approximately 30 seconds (normal size color printing in NTSC mode)
- Approximately 34 seconds (normal size color printing in PAL mode)
- Approximately 38 seconds (normal size color printing in DIGITAL mode)

TV system
- Selectable with the NTSC/PAL selector
  - In NTSC mode: NTSC/EIA standards
  - In PAL mode: PAL B.G.I standards

Input connectors
- RGB SYNC (analog RGB signal): BNC connector × 4
  - RGB: 0.7 Vp-p
  - SYNC: 0.3 to 4 Vp-p
  - 75 ohms (75 ohm termination switch set to ON), sync negative
- S VIDEO (Separate luminance (Y) and chrominance (C) signals): 4-pin mini-DIN ×1
  - Y: 1 Vp-p
  - C: In NTSC mode: 0.29 Vp-p color burst
    In PAL mode: 0.3 Vp-p color burst
  - 75 ohms (75 ohm termination switch set to ON), sync negative
- VIDEO (NTSC composite video signal in NTSC mode and PAL composite video signal in PAL mode): BNC connector × 1
  - 1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative
- AC IN (for power input)

Output connectors
- RGB SYNC (analog RGB signal): BNC connector × 4
  - RGB: 0.7 Vp-p
  - SYNC: 1 Vp-p
  - 75 ohms (75 ohm termination switch set to ON), sync negative
- S VIDEO (Separate luminance (Y) and chrominance (C) signals): 4-pin mini-DIN × 1
  - Y: 1 Vp-p
  - C: In NTSC mode: 0.29 Vp-p color burst
    In PAL mode: 0.3 Vp-p color burst
  - 75 ohms (75 ohm termination switch set to ON), sync negative
- VIDEO (NTSC composite video signal in NTSC mode and PAL composite video signal in PAL mode) BNC connector × 1
  - 1 Vp-p, 75 ohms (75 ohm termination switch set to ON), sync negative

Controls connectors
- REMOTE 1 (front panel): special mini jack × 1
  - For RM-5500 Remote Control Unit (not supplied)
- REMOTE 2 (automatic printing connector): Stereo mini jack : × 1
  - For RM-91 Remote Control Unit (not supplied) (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 66)
- REMOTE 3 (automatic printing connector): D-SUB 9-pin connector × 1
  - For FS-30 Foot Switch (not supplied) (see "Selecting the Operation Mode for Automatic Printing Capabilities" page 66)

RS-232C (Computer control interface):
D-SUB 25-pin connector × 1
Output: 5-kilohm at load
Typ I 8 V
Input: 5-kilohm at load
High level 5 to 15 V
Low level –5 to –15 V

Ink ribbon cassette and paper sets
Color printing pack: UPC-5510 (100 sheets × 2)
OHP printing pack: UPC-5530 (100 sheets)

Supplied accessories
Ink ribbon holder (1)
Color printing pack (1)
Paper tray (1)
Paper cover (1)
AC power cord (1)
Warranty card (1) (for UP-5500/5600MD)
Instructions for Use (1)

Using the automatic printing capabilities (REMOTE 2/REMOTE 3)

If you send the remote control pulse signals illustrated through the REMOTE 2 or REMOTE 3 connector, the printer is remotely controlled according to the remote control setting. (see page 66)

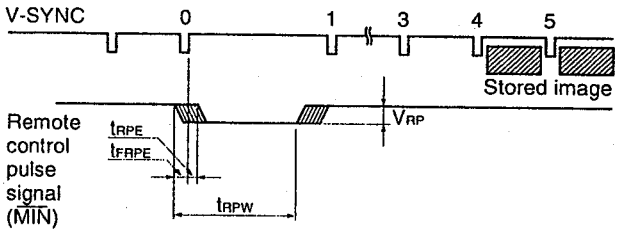
Turn on the power of the printer and select the input signal. Set the monitor display to the input signal. Send a remote control pulse signal at the timing shown below:

Note

The remote control pulse signal examples introduced here are one of the typical operation timing. The timing may be affected due to the selected memory page and print type.

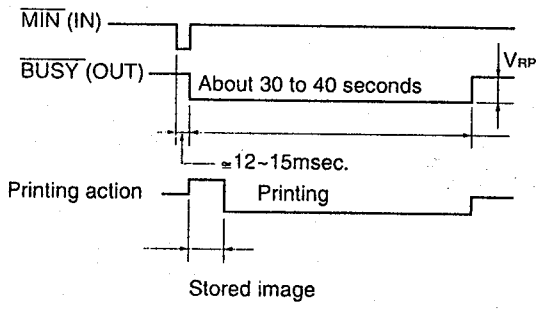
CAPTURE timing pulse for REMOTE 2

Regulations of remote control pulse (MIN)

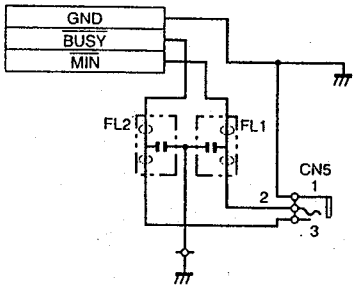


Notation	Parameter	MIN	TYP	MAX	Unit	Remarks
tRPE	Time within which a remote control pulse should be cleared to zero.	0	—	5	msec	—
tFRPE	Time within which a remote control pulse should be cleared to zero.	0	—	5	msec	—
tRPW	Length of a remote control pulse.	15	—	—	msec	—
VRP	Amplitude of a remote control pulse.	—	—	5	V	This value is based on TTL standards.

The relation between $\overline{\text{MIN}}$ and $\overline{\text{BUSY}}$

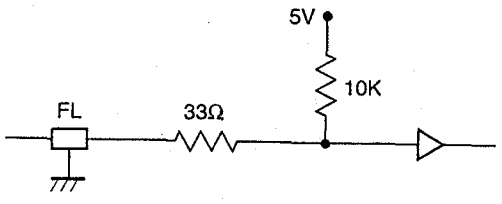


REMOTE 2 connector

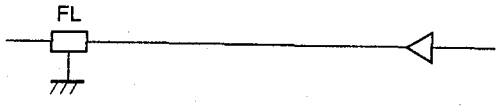


CAPTURE timing pulse for REMOTE 3

Input equivalent circuit



Output equivalent circuit



Pin assignment

Pin	Signal	Remarks
1	A	(Input) TTL level
2	B	(Input) TTL level
3	C	(Input) TTL level
4	Reserved	(Input) TTL level
5	Capture	(Input) TTL level
6	GND	— —
7	VD output	(Output) TTL level
8	Light	(Output) TTL level
9	Busy	(Output) TTL level

Input: Input the signal at the low level for more than 15 msec.

VD OUTPUT: The VD of the input signal currently selected is output.

Light: A low level signal is output when the printer is capturing the image in memory.

Busy: A high level signal is output when the printer can capture an image.
A low level signal is output when the printer cannot capture * the image.

* When the printer cannot capture the image:
When the input signal exists in the printer and the user wants to capture the image into a certain memory, but cannot because the image stored in that memory is being printed.

Note

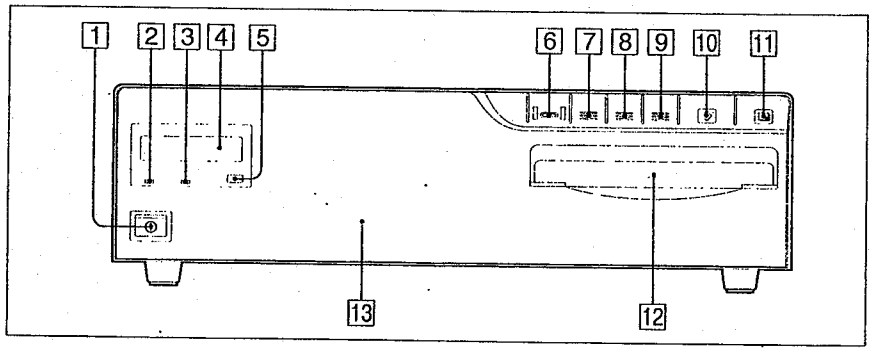
When TIMER of the FUNCTION-SETUP menu is set to OFF, the memory image is displayed on the screen after the image is captured in memory. In such a case, whenever you store the image, press the SOURCE/MEMORY button so that the source image appears on the video monitor. Displaying the memory image does not allow to capture the image with the correct timing.

Design and specifications are subject to change without notice.

1-2. LOCATION AND FUNCTION OF PARTS AND CONTROLS

For details, refer to the pages given in parentheses.

Front



1 ⏻ **POWER switch (13)**
Press to turn the printer on or off.

2 **PRINT lamp**
Lights while the printer is printing.

3 **ALARM lamp (86)**
Lights in orange when the ink ribbon or paper is exhausted, the paper jams, or another problem occurs.

4 **Printer window display (71, 94)**
Displays the messages that also appear along bottom edge of the monitor screen. Also displays the menu screen line to which the cursor is positioned. If an error occurs, a corresponding error message is displayed. The printer window display can be cleared with the SYSTEM-SETUP menu.

5 **Remote sensor (45)**
Aim the head of the remote control unit toward this sensor.

6 C **CLEAR button (38, 40, 41)**
Press this button to clear the images stored in the memory pages. Which images that can be cleared with the CLEAR button depends on the setting made with the FUNCTION-SETUP menu.

7 **MEMORY PAGE button (21, 24)**
Press to select the memory page.

8 **SOURCE/MEMORY button (16, 28, 51)**
Press to select which signal is to be output to the monitor.
The memory image and source image are toggled each time you press this button.

9 **BACK SPACE button (29)**
Press this button to move the cursor (green *) back to the former position, such as when you are storing multiple reduced images. Each time you press the BACK SPACE button, the cursor moves back one space.

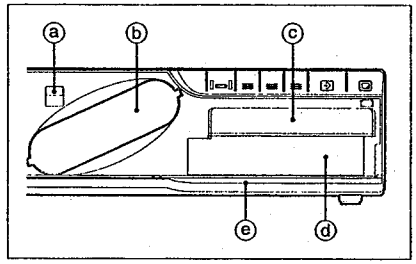
10 **CAPTURE button (16, 18, 21, 28, 32, 33)**
Press to store an image to a memory page.

11 **PRINT button (16, 18, 21, 29, 32, 37)**
Press to make a printout.

12 **Paper ejection slot**
The printout is ejected here.

13 **Front panel (8)**
Pull the top on the front door toward you to open it.
Opening the front panel reveals the sub panel buttons, ink ribbon cartridge, paper tray, paper cover and so on.

When the front panell is open.



ⓐ **EJECT button (8)**
Push to eject the ink ribbon cartridge.

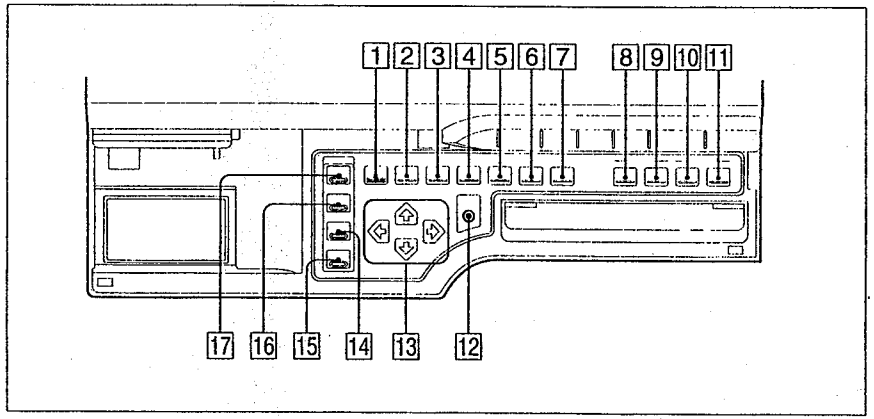
ⓑ **Ink ribbon cartridge compartment (8)**
Insert the ink ribbon cartridge (the ink ribbon holder loaded with an ink ribbon)

ⓒ **Paper tray (11)**
Load paper into this tray.

ⓓ **Paper cover (11)**
Paper is ejected onto this cover.

ⓔ **Sub panel buttons**
For a detailed explanation of the sub panel buttons, see the following "Sub Panel".

Sub Panel



1 **MENU button (25)**
Press this button to display or clear the menus on the screen and printer window displays.

2 **USER PRESET button (18, 78)**
Press this button to recall a registered user set. Pressing this button causes the currently selected user set to be is displayed for two or three seconds. To recall another user set, release the button while the desired user set number is displayed. Each time you press this button, user set is switched in the order of 1, 2, 3.

3 MULTI PICTURE button (22, 33)
Press this button to select the desired printout type. When you press this button, the currently selected printout type is displayed for two or three seconds. Each time you press this button, the type is switched in the order of 1, 2, 4, 8, 16, 1....

4 PRINT QTY (quantity) button (19)
Press this button to set the number of copies. You can set any number up to 9. You can change the number even when the printer is *printing*.

5 RIBBON REMAIN button (20)
Press this button to display the type and the number of printouts that can still be made on the regular screen. Not to display them, press this button again.

6 *INPUT SELECT button (13)*
Press this button to select the input signal. When you press this button, the currently selected input signal is displayed for two or three seconds. To select the input signal, release the button while the desired input signal is displayed. Each time you press this button, the input signal is switched in the order of RGB, S-VIDEO, VIDEO, RGB...

7 DISPLAY P IN P button (26)
Press this button to display the source image on part of the memory image.

8 CAPTION INPUT button (35)
Press this button to display or clear the caption input menu.

9 CAPTION ON/OFF button (37)
Used to determine whether a caption is printed on the printout. To make a printout with a caption, press this button to display CAPTION ON. To make a printout without a caption, press this button to display CAPTION OFF.

10 MOTION CORRECT button (16, 29)
Press this button to display MOTION CORRECT ON so as to make a printout with no blur if the memory image produces a blurred printout. The printout resolution, however, is slightly degraded.

11 MOTION CHECK button (29)
Press this button to check whether the image stored in memory was moving when you stored two- or four-reduced images. Also, this button is used to enter a caption.

12 EXEC button (18, 35, 62, 64, 65, 78)
Press this button to execute the values set with the COLOR ADJUST menu or to register a user set to the SYSTEM-SETUP menu. Also, this button is used to enter the characters of a caption.

13 Cursor keys (25)
Use to select a desired item from the menu by pressing the ⇧ or ⇩ button and set the value by pressing the ⇦ or ⇨ button.
Also, these keys are used to position the cursor (green) on the regular screen.

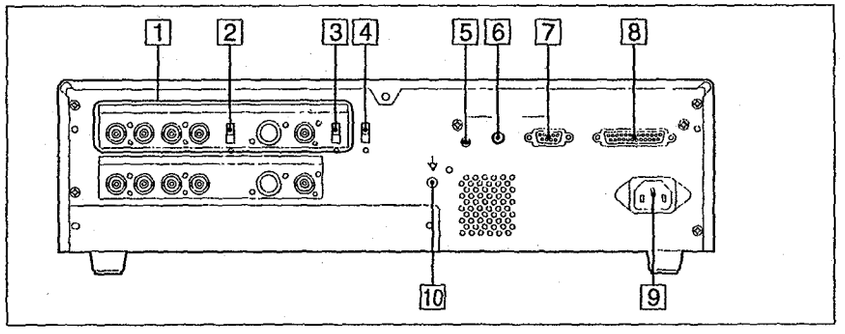
14 ANALOG button (52, 55)
Press this button to display or clear he ANALOG SETUP menu.

15 REVIEW button (17, 62, 70)
Press this button to temporarily clear the monitor display. While this button is held down, the monitor display is cleared.

16 R/G/B/D/L button (59)
Press this button to display or clear the COLOR ADJUST SETUP menu.

17 PRESET button (62)
Press this button to recall the set values for the printout color (color intensity and color contrast). Pressing this button causes the currently selected input signal to be displayed for two or three seconds. To select the input signal, release the button while the desired PRESET number is displayed.

Rear



1 INPUT (input signal) connectors (46)
Used to connect the video equipment supplying the source image.

Connector	Connectable equipment
S-VIDEO	Video equipment with Y/C separated output connector.
VIDEO	Video equipment with composite video signal output connector
RGB SYNC	Video equipment with RGB/SYNC output connectors.

Refer to "Important safeguards/notices for use in the medical environments" on page 2.

2 75ΩON/OFF termination switch (for RGB input) (46)
Normally, set this switch to ON. Set it to OFF if the input signal should drop when you connect additional equipment to the video equipment.

3 75ΩON/OFF termination switch (for NTSC composite video signal in NTSC mode and PAL composite video signal in PAL mode) (46)
Normally, set this switch to ON. Set it to OFF if the input signal should drop when you connect additional equipment to the video equipment.

4 NTSC/PAL (NTSC/PAL TV) selector (46, 47)
Set this selector according to the TV system of the input signal. If you change this setting, turn the printer power off, then back on again.

Selector position	When setting
NTSC	The NTSC system video equipment is connected.
PAL*	The PAL system video equipment is connected.

* To use the printer in PAL mode, the UPK-5501NP memory board should be installed. For details, contact your nearest Sony dealer. If the UPK-5501NP is not installed in the printer, "Not enough memory" will appear in PAL mode.

5 REMOTE 1 connector (special mini jack) (48)
Used to connect the RM-5500 Remote Control Unit (not supplied)

6 REMOTE 2 connector (stereo mini jack) (48, 84)
Used to connect the RM-91 Remote Control Unit (not supplied) or input remote control pulse signals for automatic printing.

7 REMOTE 3 connector (D-SUB 9-pin) (48, 85)
Used to connect the FS-30 Foot Switch (not supplied) or input remote control pulse signals for automatic printing.

8 *RS-232C connector (48)*
Used to connect the computer used to control the printer. For details, contact your nearest Sony dealer.

[9] **~AC IN connector (46)**
Used to connect the printer to a wall outlet with the supplied power cord.

[10] **Equipotential ground terminal connector ⏚**
Used to connect to the equipotential plug to bring the various parts of a system to the same potential.
Refer to "Important safeguards/notices for use in the medical environment" on page 2.

[11] **OUTPUT connectors (46)**
Used to connect the video monitor.

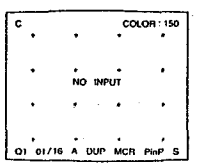
Connector	Connectable equipment
S-VIDEO	Video equipment with Y/C separated output connector.
VIDEO	Video equipment with composite video signal output connector
RGB SYNC	Video equipment with RGB/SYNC output connectors.

Refer to "Important safeguards/notices for use in the medical environment" on page 2.

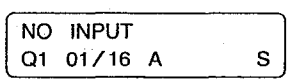
Comparing Printer Window Display with the Video Monitor Display

You can operate the printer using either the printer window display or the monitor screen display. Although the printer window display has a narrower display range and can show only a limited number of characters, the displayed contents and operations are the same as those of the monitor display. Use whichever method you prefer.
A brief explanation of the printer window display is given below, in comparison with the monitor screen.

Regular screen

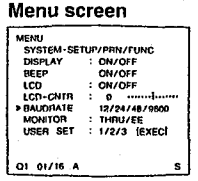


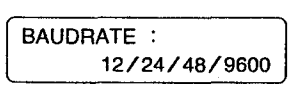
MCR, P in P and DUP are displayed only on the monitor screen.



Displays the bottom line of the monitor screen.

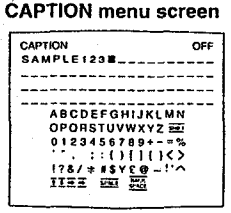
Menu screen





Displays the item to which the cursor is positioned on the monitor display.

CAPTION menu screen

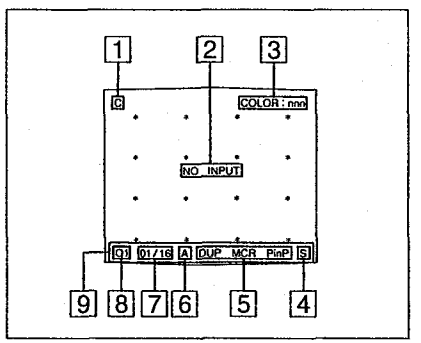


Monitor Display

There are two types of display: the regular screen display and menu screen display. The two types of display are explained using the monitor display.

Regular screen display

When you first turn on the printer, the regular screen message appears.



[1] **C (Caption) display section**
C is displayed in white when the printer is set to print a caption consisting of the date and/or comments.

[2] **Message display section**
Messages are displayed.

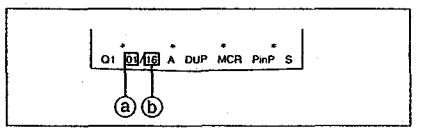
[3] **Ink ribbon type and remaining amount of ink ribbon display section**
Displays the ink ribbon type and remaining amount of ribbon (indicates the number of printouts that can still be made with the ribbon) when the RIBBON REMAIN button is pressed to set it to on.

[4] **S or M (image type) display section**
This indicates the type of image being displayed on the monitor screen.
S (Source): The image from the input signal source is displayed on the screen.
M (Memory): The image stored in memory is displayed on the screen.

[5] **Printer operation specification display section**
DUP (copy function), MCR (MOTION CORRECT ON mode) and P in P (function to display the source image over part of memory image) are displayed according to the printer specification set with the menu and buttons.

[6] **Memory page display section**
Indicates the currently selected memory page. While the image in the memory page is being printed, the memory page indication blinks. The memory page whose memory image is queued to be printed lights in green.

[7] **Printout type display section**
Displays the selected printout type. When the printer is set to store multiple reduced images into memory, a corresponding number of * appears to indicate the memory status, as follows.



ⓐ Indicates the cursor position (green). The image will be stored to the corresponding position on the selected memory page.
ⓑ Indicates the printout type.

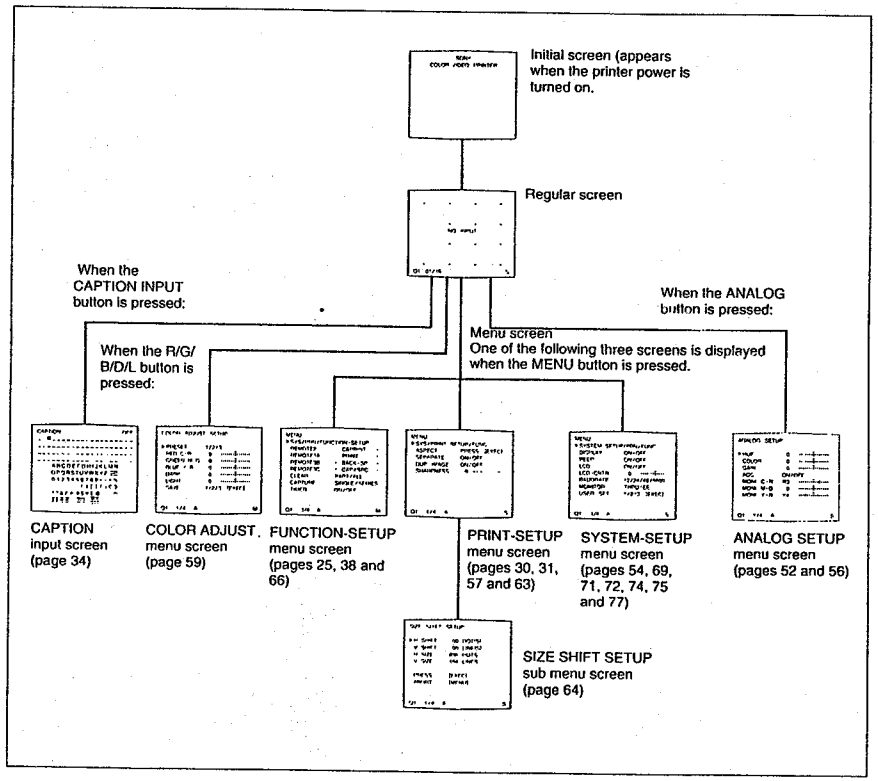
[8] **Q (print quantity) display**
Indicates the number of copies to be printed. This item blinks while the printer is busy.

[9] **Printer setting status display section**
The corresponding currently selected status is displayed when the USER PRESET, MULTI PICTURE, PRINT QTY, INPUT SELECT or PRESET button. Each time you press these buttons, their selections are switched and displayed in order.

Menu screen

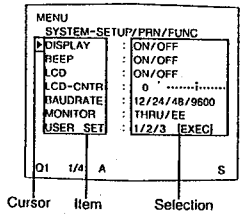
Menu screen tree chart

The menu screen configuration is shown using the tree-chart. For details, refer to the pages indicated in ( ).



Menu screen display

Example: SYSTEM-SETUP menu screen

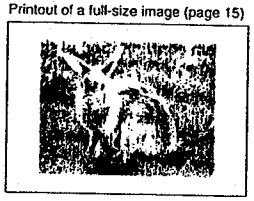


1-3. SYSTEM OVERVIEW

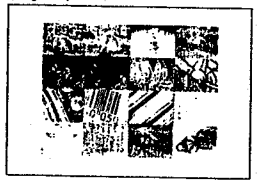
The UP-5500/5600MD/5600MDP color video printer is designed for capturing images from video equipment, computers and medical equipment devices and for printing out high-resolution images, either in 256 shades in full color (about 300 dpi). You can make various types of printouts. You can also add a caption onto the printout. You can operate the daily printer operation by using the buttons and setup the printer interactively by picking from displayed menus. You can also use the printer as peripheral equipment of the computer by mounting the UPK-5502SC Digitanl Interface Board onto the printer.

Printouts that can be made with the printer

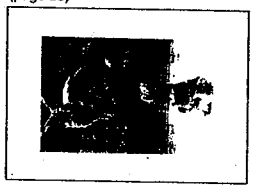
Printout of a full-size image (page 15)



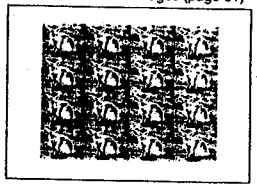
Printout of 16 reduced images (page 23)



Printout of two reduced images (page 23)

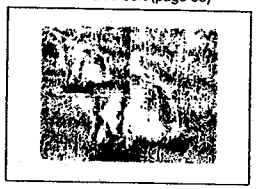


Printout of identical images (page 31)



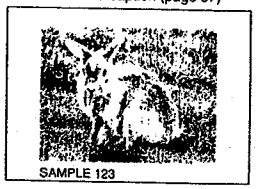
Printout of four reduced images (page 23)

Printout with an insert (page 33)



Printout of eight reduced images (page 23)

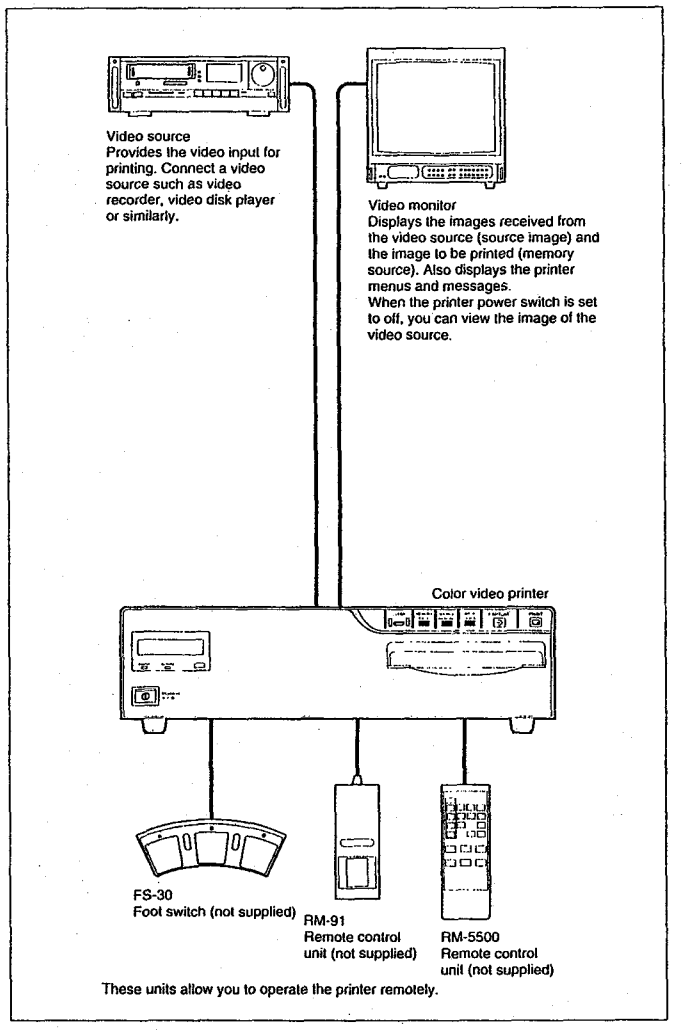
Printouts with a caption (page 37)



In addition to the above printouts of multiple reduced images, printouts of multiple reduced images with white borders can be made.

System Configuration

The following shows an example printer system configuration.



1-4. BEFORE PRINTING

This section describes the following operations that must be made prior to starting printing after mounting the paper tray and paper cover on the printer and making the necessary connections.

- Loading an ink ribbon cartridge (see page 8)
- Loading paper (see page 11)
- Selecting the input signal (see page 13)

Once the above operations have been completed, there should be no need to repeat them during routine printing. Perform them only when absolutely necessary.

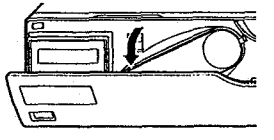
Loading an Ink Ribbon Cartridge

To make printouts, an ink ribbon cartridge (an ink ribbon holder which has been loaded with an ink ribbon) and paper must be loaded. The cartridge and paper must be compatible. (see "Ink Ribbon and Paper" page 82)
Load the ink ribbon into the supplied ink ribbon holder, then load the ink ribbon cartridge into the printer's ribbon compartment. The supplied ink ribbon holder can be used for both the color printing and transparency printing.

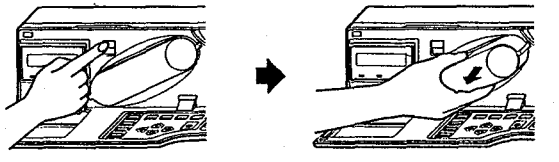
Notes

- Before attempting to load an ink ribbon into the ink ribbon holder, check that the ribbon and paper are compatible. If the printer detects an incompatible combination, an error message appears in the printer window display and operation is disabled.
- Use only ink ribbons and paper that are designed for use with this printer. Failing to do so is likely to result in unsatisfactory printing or malfunctions.
- When replacing the ink ribbon, do not turn off the power. Turning off the power will cause the image stored in the memory (also called memory image in this manual) to be lost.

1 Open the front panel by pulling the front panel top toward you.

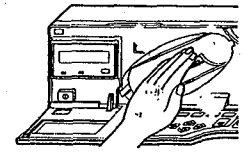


2 Remove the ink ribbon cartridge by pushing the EJECT button.
The ink ribbon cassette pops out.



Note

Never put your hand into the ink ribbon compartment. The thermal head becomes very hot. You may burn yourself if you touch it.

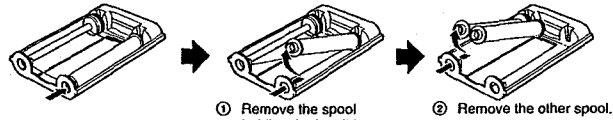


When the ink ribbon cartridge cannot be ejected

Turn the power off, then back on again. Then, after a while, press the EJECT button.

In this case, the image in memory will be lost.

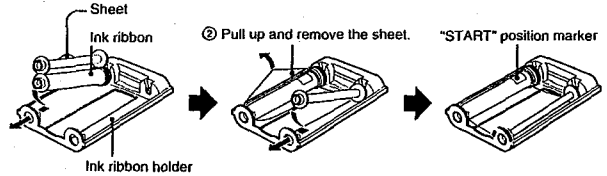
3 Detach the used ink ribbon from the ink ribbon holder.



① Remove the spool holding the ink ribbon.

② Remove the other spool.

4 Load the ink ribbon into the ink ribbon holder.



① Load the spool holding the ink ribbon into the left-hand part of the holder.

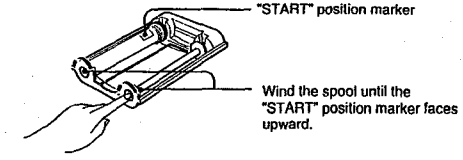
③ Fit the other spool into the right-hand part of the holder.

④ Wind the spools of the ink ribbon as illustrated until a START position marker appears.

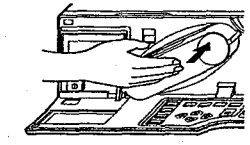
Continue to next page →

5 Remove any slack from the ink ribbon.

If the ribbon is left slack, it may be damaged when inserted.



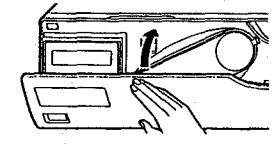
6 Insert the ink ribbon cartridge firmly until it stops.



When the ink ribbon cartridge cannot be inserted

Turn the power off, then back on gain. Then, insert the ink ribbon holder.

7 Close the front panel.



Notes

When using ink ribbons

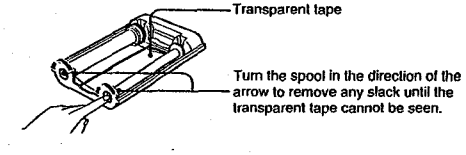
- Once an ink ribbon has been completely used, replace it. Ink ribbons are not reusable.
- Do not touch the ink ribbon or place it in a dusty location. Finger prints or dust on the ink ribbon will result in imperfect printing or malfunction of the head.

When storing ink ribbons

- Avoid placing the ink ribbon in a location subject to:
  - high temperatures
  - high humidity
  - excessive dust
  - direct sunlight
- Store a partially used ink ribbon in its original packaging.

If your ink ribbon should tear

Repair the tear with transparent tape. There should be no problem with using the remaining portion of the ribbon.



Loading Paper

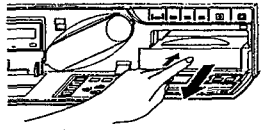
To load paper, follow the procedure below. Be careful not to touch the printing surface.

Notes

- When loading the paper while the printer is operating, do not turn off the power. Turning off the power will cause the image stored in memory to be lost.
- Use only the paper recommended in this manual. Do not use the paper for the existing UP-5000 series. Otherwise, malfunction such as paper jams are likely to occur.

1 Open the front panel by pulling the front panel top towards you.

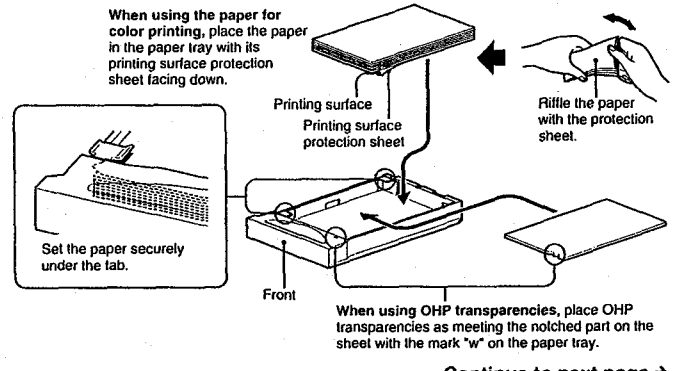
2 Push in the paper tray.
The paper tray is ejected.



3 Place the print paper in the paper tray.

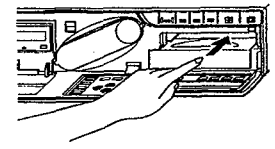
Notes

- The paper tray holds up to 100 sheets of paper. When adding paper to a partly full tray, be careful that the total number of sheets does not exceed 100. If you exceed this limit, paper jams may occur.
- When adding paper to a partly full tray, remove the printing surface protection sheet (black or blue). Do not place different types of paper in the tray. Doing so may cause paper jams to occur.
- Load the paper so that it lays flat in the paper tray. If the paper is curled, it will overflow from the paper tray and the printing position may shift. If this happens, load fewer sheets in the paper tray.



Continue to next page →

4 Slide the paper tray back into the printer until it clicks into place.



5 Close the front panel.

Notes

When handling the paper and OHP transparencies

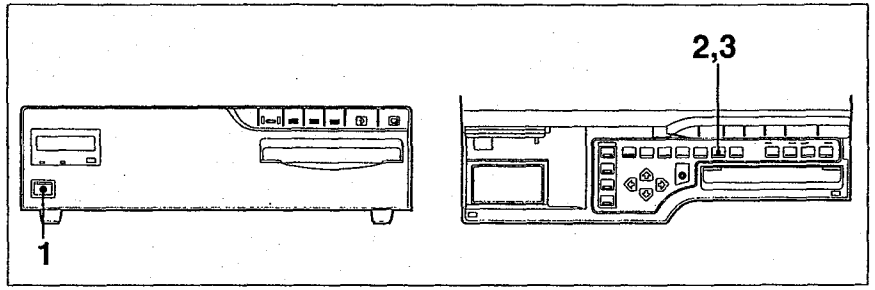
Do not touch the printing surface. Dust or finger prints are likely to cause unsatisfactory printing. Hold the paper by the printing surface protection sheet.

When storing print paper

- Avoid storing the print paper in a location subject to:
  - high temperatures
  - high humidity
  - excessive dust
  - direct sunlight
- Use the original package for storing unused paper.

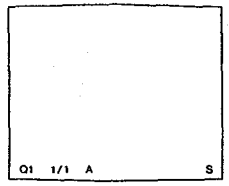
Selecting the Input Signal

Before printing, select the input signal (the input connector to which the signal to be printed is being input—VIDEO, S-VIDEO, or RGB). Once you have selected the input signal, this setting remains effective until you select another source.

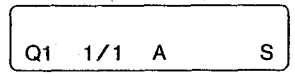


1 Turn on the video monitor and the printer.
The following message appears once the printer is ready to operate.

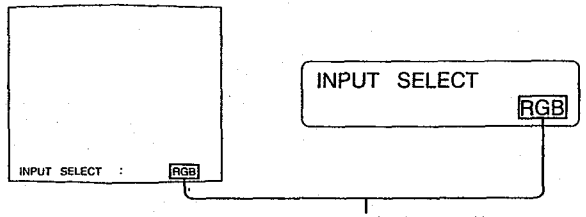
Video monitor screen



Printer window display



2 Press the INPUT SELECT button.
The currently selected input signal appears.



Continue to next page →

3 Press the INPUT SELECT button until the desired input signal appears.
Repeatedly pressing the INPUT SELECT button causes the input signal display to change in the order of RGB, VIDEO, S-VIDEO, RGB.....
The selected signal will disappear within two or three seconds.

To confirm the currently selected input signal

Press the INPUT SELECT button. The currently selected input signal appears.

Note

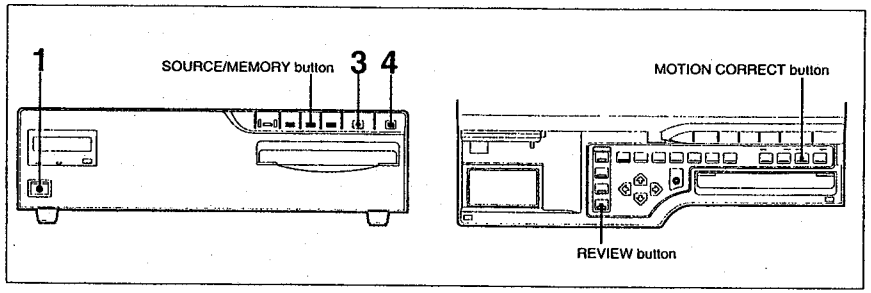
If you press the INPUT SELECT button when the memory image (image stored in the memory) is displayed, the memory image will be replaced with the source image (image sent from the source equipment).

1-5. MAKING FULL-SIZE PRINTOUTS

This section explains how to make a full-size printout. The operations described here constitute the basic procedure for making a printout.

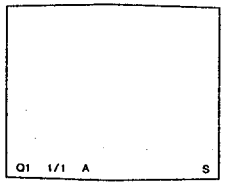
Before making a full-size printout

- All connections should have already been made. (see page 46)
- Ensure that the appropriate ink ribbon/paper set is being used and that they are correctly loaded. (see pages 8, 11 and 82)
- Select the input signal to be used to make a printout. (see page 13)
- Set the printer to store one full-size image into memory. (see page 23)
- Select the appropriate memory page. (see page 24)
- Select the desired user set number. (see page 78)

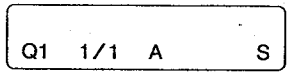


1 Turn on the video monitor and the printer.
The following screen appears when the printer is ready to operate.

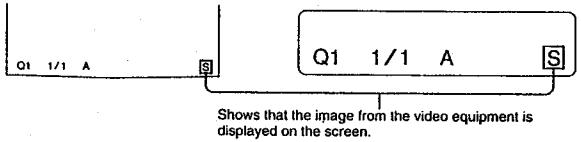
Video monitor screen



Printer window display

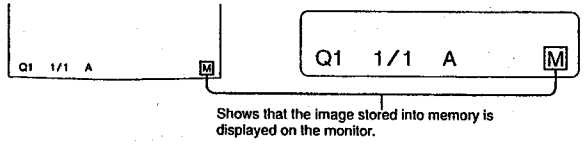


2 Start the video source.
This operation is done using the controls of the video equipment acting as the source.



Continue to next page →

3 Press the CAPTURE button at the instant when the image you want to print appears on the screen.
The image is stored into memory. The memory image is displayed on the screen. Which image appears after this, the source image or memory image, depends on the setting made with the FUNCTION SETUP menu and DISPLAY P IN P button. (page 25).



If the stored image is blurred

A quickly moving image may be blurred when printed. Should this occur, press the MOTION CORRECT button to display MCR on the screen. Note that MCR does not appear in the printer window display. This sets the printer to MOTION CORRECT ON, which should eliminate blur from the printout. Perform printing again. Although the blur should be eliminated, the ultimate print quality will be slightly degraded.

Note

Printing should normally be performed with the printer set to MOTION CORRECT OFF. To confirm the setting, press the MOTION CORRECT button. The currently selected setting is displayed for two or three seconds, after which it disappears. If you do not press the button again while the currently selected setting is displayed, the setting will remain as is. If the setting is not as desired, press the MOTION CORRECT button again to change the MOTION CORRECT mode while the currently selected setting is displayed.

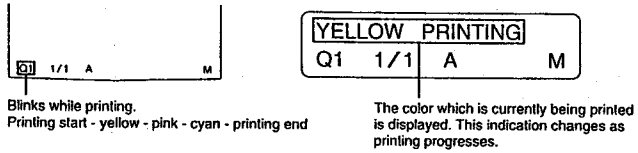
To change the stored image

① To display the source image when the memory image is displayed on the screen, press the SOURCE/MEMORY button .
② Press the CAPTURE button at the instant the image you want to print appears. The previous image is replaced with the new one.

Note

If you turn off the power, the image stored in memory will be lost. Should this happen, store the image into memory again after turning on the power. If no image is stored in memory, the printer will not print even if you press the PRINT button.

4 Press the PRINT button.
It takes about 30 seconds to make a printout.



If the printer does not print

The printer will fail to print in the following cases:

- While an error message is displayed on the monitor screen and printer window display. Proceed as described in "Error/Warning Messages" on page 86.
- Image data stored in the memory is lost if you turn off the power. Store the image into memory again, then press the PRINT button.

When you want to see an image that is hidden below a screen message

You can erase the screen message from the video monitor screen by pressing the REVIEW button. The screen message disappears as long as you keep the button hold down.

If a black line appears on the printout

Sometimes, a black line appears on the printout, although it does not appear on the video monitor. This black line can be eliminated from the printout. (see "Changing the Printout Size/Printout Area" page 63)

If the image quality of printouts is not satisfactory

You can adjust the image quality of the printouts. (See "Adjusting the Sharpness and Adjusting the Printout Color" pages 57 and 59)

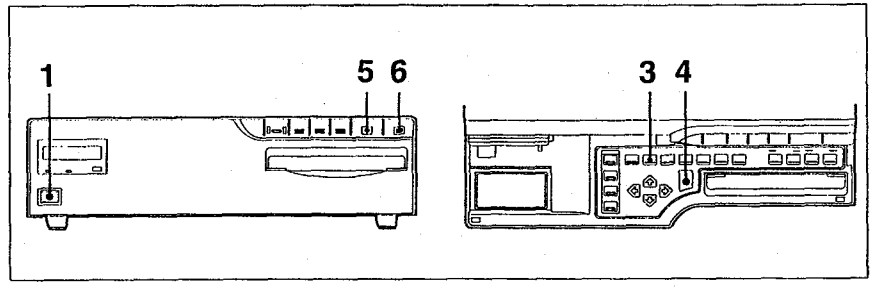
Notes

When storing your printouts:

- Avoid storing the printout in a location subject to high temperatures, high humidity, excessive dust and direct sunlight.
- Do not stick tape on a printout. Also, avoid leaving a plastic eraser on a printout or placing a printout in contact with materials which contain plasticizer (under a desk mat, for example).
- Do not allow the printed surface of an OHP transparency to press against anything. The ink may come off onto the other surface.
- Do not allow alcohol or other volatile organic solvents to come into contact with the printouts.

Making Printouts with the Desired User Set No.

You can register all the printer settings as a user setting. The printer allows you to register three sets of settings as User Set 1, 2 or 3. By selecting a user set , the printer functions according to the corresponding settings. ("Registering a User Set" page 77)

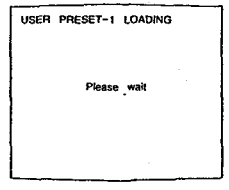


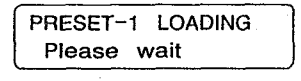
1 Turn on the video monitor and printer.

2 Start the video source.
This operation is done using the controls of the video equipment acting as the source.

3 Select the desired user set by pressing the USER PRESET button.
Repeatedly pressing the USER PRESET button causes the user sets to be recalled in the order of 1, 2, 3 , 1....

4 Press the EXEC button to execute the selected user set.
While the selected user set is being loaded, the following message appears.





Note

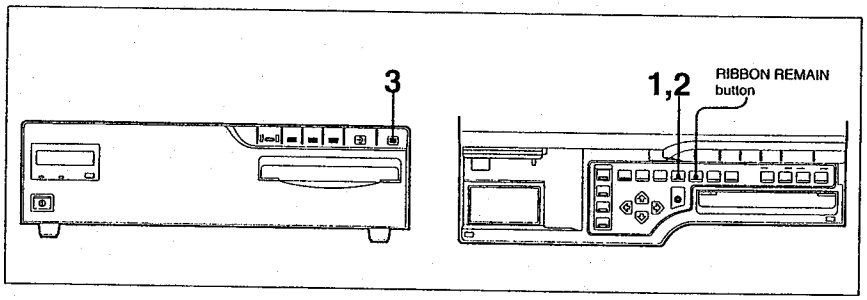
If the user set is changed, the image stored in memory page will be cleared.

5 Press the CAPTURE button at the instant the image you want to print appears on the screen.
That image is stored into memory.

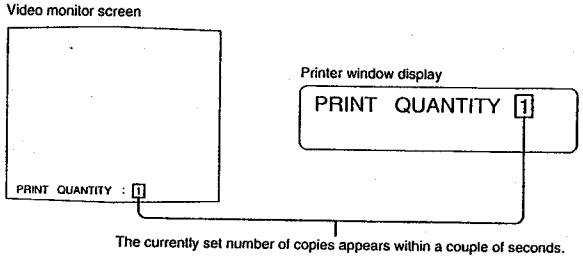
6 Press the PRINT button.
The printer make printouts according to the user set selected in step **3**.

Making Multiple Copies of a Single Image

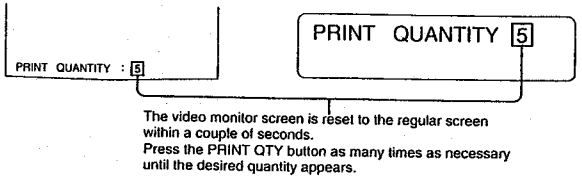
You can print up to 9 copies of a memory image.
The following steps can be performed either before you start printing or while printing. You can change the designated number of copies any time during printing.



1 Press the PRINT QTY button.
If you do not perform any operation after you press the PRINT QTY button, the currently set number of copies appears for 2 or 3 seconds, after which it disappears.

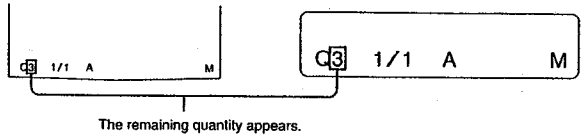


2 Press the PRINT QTY button until the desired number appears.
Repeatedly pressing the PRINT QTY button increases the quantity up to 9, after which the number returns to 1.
Pressing the ⇦ or ⇨ button while the message PRINT QUANTITY appears decreases or increases the quantity. By pressing ⇦ and ⇨ button at the same time, the quantity is reset to 1.



Continue to next page →

3 Press the PRINT button.



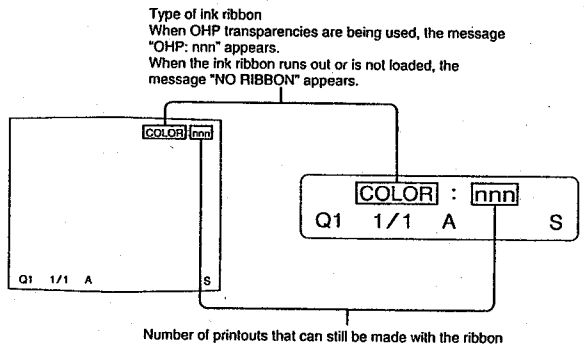
You can change the quantity to be printed by pressing the PRINT QTY button during printing. In such a case, after completing printing, the quantity is reset to the number set in step **2**.

If the paper runs out during printing

Load the paper into the paper tray and press the PRINT button. The printer prints the remaining copies.

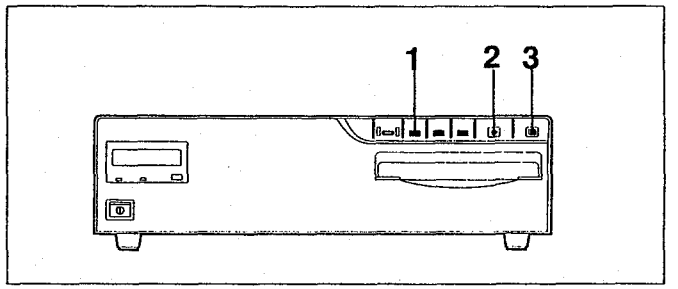
To check the amount of ink ribbon remaining

Press the RIBBON REMAIN button. The type of the ink ribbon and the number of printouts that can still be made with the ink ribbon are displayed. To clear the display, press the RIBBON REMAIN button again.

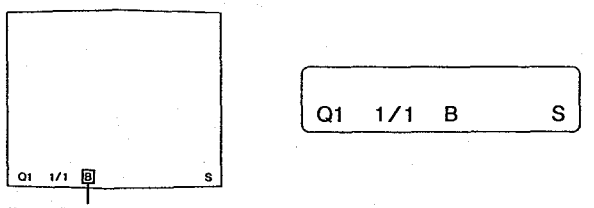


Storing Another Image While Printing an Image

While the printer is operating, you can store another image into another memory page to be printed once the printer becomes free. The usable memory pages depend on the type of printouts and settings. ("Selecting the memory page" page 24)



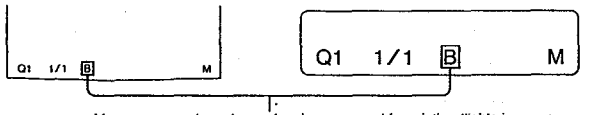
1 Select the desired memory page by pressing the MEMORY PAGE button.
Pressing the MEMORY PAGE button switches the memory page.



The available memory pages appear in white.

2 Press the CAPTURE button at the instant the image you want to print appears on the screen.

3 Press the PRINT button.
The image stored in step **2** is queued. The image is printed as soon as all previous printing jobs have been completed.



Memory page whose image has been queued for printing (lights in green on the video monitor).
The memory page display returns to white on the video monitor once printing has been completed.

Note

Another image cannot be stored into a memory page into which an image has already been queued for printing.

4 To queue another memory page, repeat steps **1**, **2** and **3**.

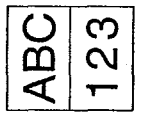
1-6. MAKING VARIATIONS OF PRINTOUTS

You can store various kinds of images into memory and can vary the printout of the stored images by changing the print mode.

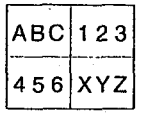
Types of printouts that the printer can produce

The following types of printout of the images stored in memory can be made.

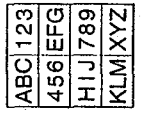
Printout of a full-size printout



Printout of two reduced images

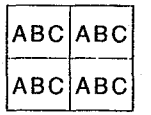


Printout of four reduced images

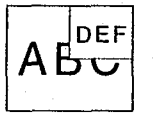


Printout of eight reduced images

Printout of 16 reduced images



Printout of identical images



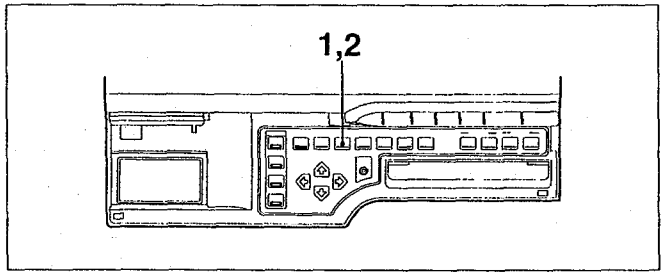
Printout with an insert

Making a Printout of Multiple Reduced Images

You can store multiple images into a memory page and print them, each reduced as necessary such that 2, 4, 8 or 16 images appear on a single printout. This section explains how to make a printout with multiple reduced images.
A printout having multiple reduced images is done by following the procedure below.

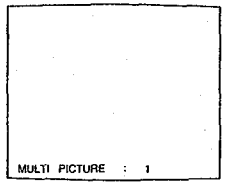
① Determining the number of reduced images. (page 23)
② Selecting the memory page (page 24)
③ Selecting how to store the images into memory (page 25)
④ Confirming the user setting (page 77)
⑤ Printing the multiple reduced images stored in the memory page (page 27)

Selecting the number of reduced images to be stored in memory



1 Press the MULTI PICTURE button.
The current setting appears. The video monitor screen is reset to the regular screen after a few seconds.

Video monitor screen



Printer window display

Continue to next page →

2 Press the MULTI PICTURE button until the desired multiple image type appears.
Repeatedly pressing the MULTI PICTURE button switches the type of reduced image printout.

Displayed type	Number of reduced images
1	1 (Full-size image)
2	2 (Two reduced images)
4	4 (Four reduced images)
8	8 (Eight reduced images)
16	16 (16 reduced images)

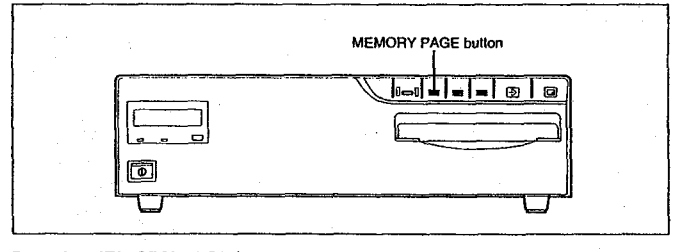
After a few seconds, the video monitor screen is reset to the regular screen.

Selecting the memory page

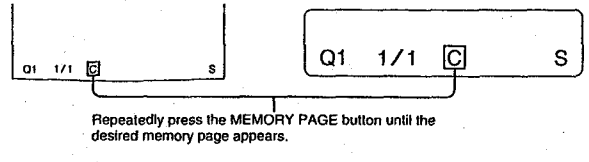
To make a printout, it is first necessary to store the desired image into a memory page in the printer. The usable memory page depends on the type of the image to be stored.

Type of image to be stored	Usable memory page	
	Standard specifications	Printer fitted with UPK-5500 expansion memory board (not supplied)
Full-size image	A, B, C, D	A, B, C, D, E, F, G, H
Two reduced images	A, B	A, B, C, D
Four reduced images	A	A, B
Eight reduced images	A, B	A, B, C, D
16 reduced images	A	A, B

To select the memory page



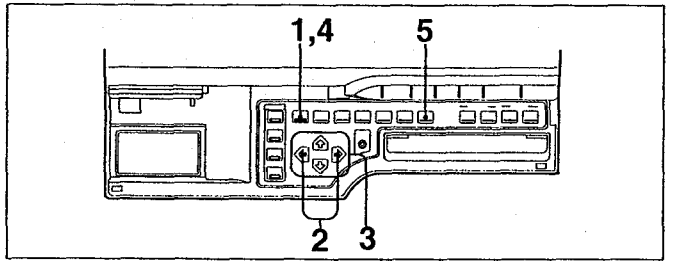
Press the MEMORY PAGE button.



Selecting how to store the image

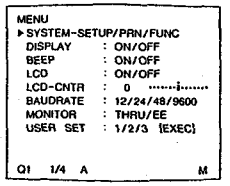
You can select how to store the image by using the FUNCTION-SETUP menu and DISPLAY P IN P button on the sub panel.

- Storing only the image currently displayed on the video monitor screen or storing images sequentially to all memory pages at regular intervals.
- Deciding the image the printer displays on the video monitor screen after storing the image.



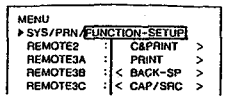
1 Press the MENU button.
The following screen appears.

Video monitor screen

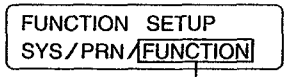


Printer window display

2 Select FUNCTION-SETUP with the ⇦ or ⇨ button.

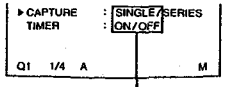


Press the ⇦ or ⇨ button until FUNCTION-SETUP appears.

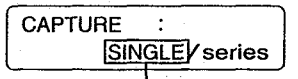


Press the ⇦ or ⇨ button until FUNCTION appears.

3 Set the method used to store images into memory.
① Select the item to be set by pressing the ⇧ or ⇩ button.
② Select the method for storing images by pressing the ⇦ or ⇨ button.



Select the desired mode (such that it appears in green) by pressing the ⇦ or ⇨ button.



Press the ⇦ or ⇨ button until the desired mode appears in capital letters.

Continue to next page →

When you select	Item to be set	Settings	Contents of settings
To decide whether the printer automatically stores images into memory page at regular intervals	CAPTURE	SINGLE	Storing only the image currently displayed on the video monitor screen by pressing the CAPTURE button.
		SERIES	Storing images sequentially to all memory pages at regular intervals by pressing the CAPTURE button.
To decide which image appears on the video monitor screen after the printer stores the image into memory.	TIMER	ON	The image stored in memory appears just after the printer stores the image, then after a few seconds, the source memory appears, whenever you press the CAPTURE button.
		OFF	The image stored in memory appears just after the printer stores the image, and the memory image remains on the video monitor screen.

* The image to be displayed on the video monitor screen also depends on the setting of the DISPLAY P IN P button.

4 Press the MENU button.
The regular screen appears.

5 Decide the image to be displayed after the CAPTURE button has been pressed by pressing the DISPLAY P IN P button.
When you press the DISPLAY P IN P button, the setting currently selected appears for a few seconds. Whenever you press the DISPLAY P IN P button, the setting is switched in order of ON, OFF, ON...

		Setting of TIMER (set in step 3)	
		ON	OFF
Setting of DISPLAY P IN P	ON	The image stored in memory appears. Then, the source image* appears at the position where the image will be stored next, in the case of a multiple-reduced image. This mode allows you to visualize the appearance of the printout. The source image is displayed at a part of the memory image in case of a full-size image.	The image stored in memory appears. When multiple reduced images are stored, the source image appears at the position into which the image will be stored next.
	OFF	The image stored in memory appears. Then, after about three seconds, the memory image is replaced with the source image.	The memory image remains on the video monitor screen.

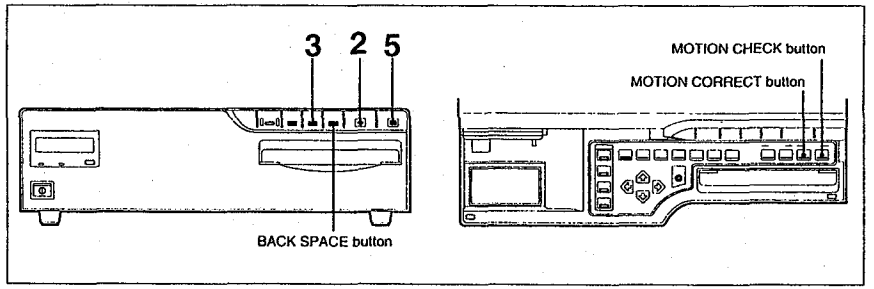
* The source image, which is displayed at a part of the memory image, may be distorted. However, even if this distored source is captured in memory, the image in memory is not distorted.

Making a Printout with Multiple Images

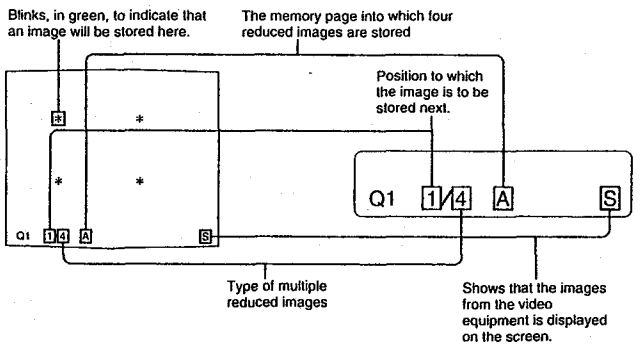
This subsection explains how to make printouts of multiple reduced images taking, as an example, the making of a printout of four reduced images.

Before making the printout of four reduced images

- Select the type of the four-reduced image. (see page 23)
- Select the appropriate memory page. (see page 24)
- Set how to store images into the memory page and select which image will appear after the image has been stored into memory, the memory image or source image. (see page 25)
- Select whether white borders are to be added. (see page 30)
- Confirm the user set. (see page 77)

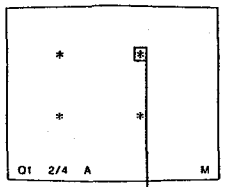


1 Start the video source.
This operation is done using the controls of the video equipment acting as the source.

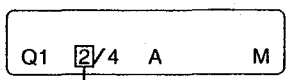


Continue to next page →

2 Press the CAPTURE button at the instant the image you want to print appears on the screen.
The image has been stored to the star (*) that blinked in green on the video monitor screen or the position number displayed on the printer window display in step **1**.
The green blinking star (referred to as the cursor) on the monitor moves to the next position and the number the printer window display advances by 1.



The blinking green cursor moves.



The number changes.

At this time, the image stored in memory is displayed on the video monitor screen. However, the image to be displayed after a few seconds depends on the setting of TIMER in the FUNCTION-SETUP menu and the setting of the DISPLAY P IN P button (see page 25)

Go to step **3** when the memory image remains on the video monitor screen.
Go to step **4** when the source image is displayed at the position where the next image is to be stored.

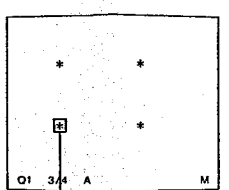
3 Press the SOURCE/MEMORY button.
The source image appears on the video monitor screen.

4 Repeat steps **2** and **3** until you have stored four images when the memory image remains on the video monitor screen.
Repeat step **2** until you have stored four images when the source image appears on the video monitor screen.

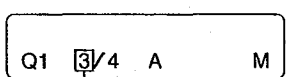
To replace a stored image

Example: When you want to change the image stored to the third position.

① Select the third position where there is the image which you want to replace by pressing the ⇦ or ⇨ button.
Pressing the ⇦ or ⇨ button moves the cursor one position.



Press the ⇦ or ⇨ button until the third cursor blinks.



Display 3 by pressing the ⇦ or ⇨ button.

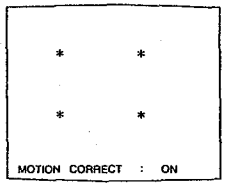
To move the blinking cursor back one position at a time
Press the BACK SPACE button. Each time you press the BACK SPACE button, the cursor moves back one position.

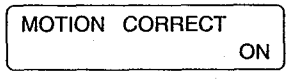
② Start the video source.
③ Press the CAPTURE button at the instant the image you want to print appears.
The previously stored image is replaced with the newly stored image.

To skip a previously stored image
When an image has already been stored, the previously stored image can be replaced by pressing the CAPTURE button.
Skip the corresponding image by pressing the ⇦ or ⇨ button.

To capture images automatically
Images can be stored in all of the memory pages according to setting made for CAPTURE of the FUNCTION-SETUP menu. (see page 26)
While images are being captured, the message PLEASE WAIT appears on the video monitor screen.

If the memory image is blurred
Press the MOTION CORRECT button such that MOTION CORRECT ON appears. The blur will be eliminated, but the ultimate printout quality will be slightly degraded.





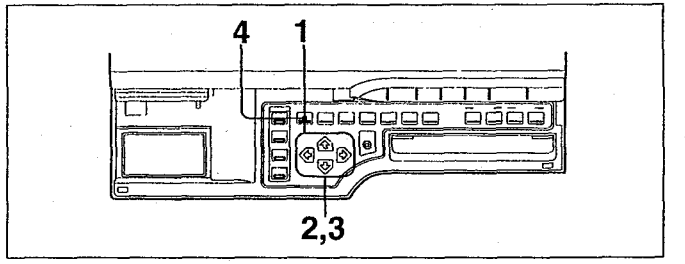
Printouts are usually made with the printer set to MOTION CORRECT OFF. To confirm the setting, press the MOTION CORRECT button. The current setting is displayed for a few seconds, then disappears.

For two and four reduced images
When two or four reduced images are being stored in memory, blur may not appear on the screen. However, when you make a printout of these multiple reduced images, the printout may appear blurred. In such a case, you can check whether the image stored in memory is quickly moving image by pressing the MOTION CHECK button before you make a printout.

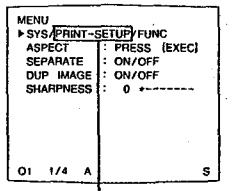
5 Press the PRINT button.
The four reduced images are printed on one sheet of paper.
Whether images are printed with white borders depends on the setting of SEPARATE of the PRINT-SETUP menu. (next page)

Making printouts with white borders

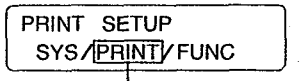
The PRINT-SETUP menu allows you to decide whether the images are printed with or without white borders.



1 Press the MENU button, then select PRINT-SETUP on the displayed menu by pressing the ⇦ or ⇨ button.

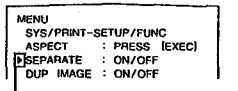


Press the ⇦ or ⇨ button until PRINT-SETUP appears.

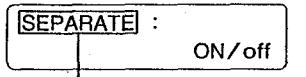


Press the ⇦ or ⇨ button until PRINT appears.

2 Select SEPARATE by pressing the ⇧ or ⇩ button.



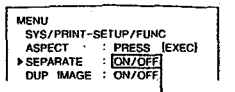
Position the cursor to SEPARATE by pressing the ⇧ or ⇩ button.



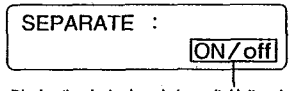
Press the ⇧ or ⇩ button until SEPARATE appears.

3 Select whether the images are printed with or without white borders by pressing the ⇦ or ⇨ button.

When you select	Settings
Printouts without white borders	OFF
Printouts with white borders	ON



Switch the desired mode to green by pressing the ⇦ or ⇨ button.



Display the desired mode in capital letters by pressing the ⇦ or ⇨ button.

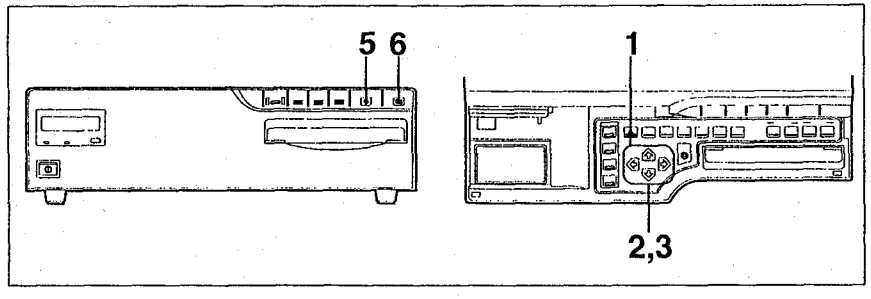
4 Press the MENU button.
The regular screen appears.

Copying Identical Images on a Printout of Multiple Reduced Images

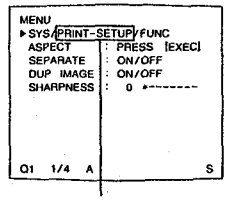
You can use the same image for all reduced images. This is convenient for making identification photographs, for example.

Before making printouts of ientical reduced images

- Set the type of multiple reduced images according to how many copies you want to make. (see page 23)
- Select the appropriate memory page. (see page 24)
- Select whether white borders are to be added. (see page 30)
- Confirm the user set. (see page 77)



1 Press the MENU button, then select PRINT-SETUP on the displayed menu by pressing the ⇦ or ⇨ button.

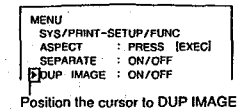


Press the ⇦ or ⇨ button until PRINT-SETUP appears.

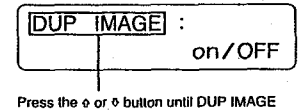
Press the ⇦ or ⇨ button until PRINT appears.

Continue to next page →

2 Select DUP IMAGE by pressing the ⇧ or ⇩ button.

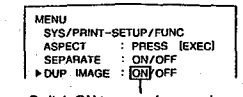


Position the cursor to DUP IMAGE by pressing the ⇧ or ⇩ button.

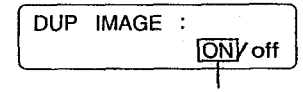


Press the ⇧ or ⇩ button until DUP IMAGE appears.

3 Select ON by pressing the ⇦ or ⇨ button.

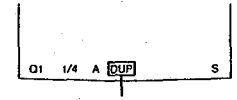


Switch ON to green by pressing the ⇦ or ⇨ button.



Press the ⇦ or ⇨ button until ON appears in capital letters.

4 Start the video source.
This operation is done using the controls of the video equipment acting as the source.



Appears when DUP IMAGE is set to ON.

5 Press the CAPTURE button at the instant the image you want to print appears on the screen.
The same image will be used for reduced images.

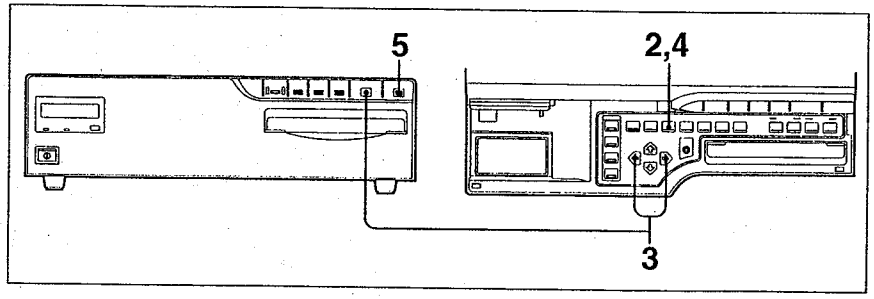
To replace a stored image

① Start the video source.
② Press the CAPTURE button at the instant the image you want to print appears.
The previously stored image is replaced with the newly stored image. The newly stored image is copied to each reduced image.

6 Press the PRINT button.
Multiple reduced copies of the same image are printed on a single sheet.

Making a Printout With an Insert

You can make printouts with an insert for the eight- or 16-reduced image printout type. The position and size of the reduced image to be inserted are those for four reduced images.



1 Display the full-size image stored in memory. (Follow steps **1** to **3** of "Making Full-Size Printouts" on page 15.)

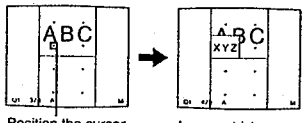
2 Set the multiple reduced image type to 8 or 16 (without white borders) by pressing the MULTI PICTURE button. ("Selecting the number of reduced images to be stored in memory" page 23 and "Making printouts with white borders" page 30)

3 Store the image to be inserted.

① Select the position where a reduced image is to be inserted by pressing the ⇦ or ⇨ button.

Example: To insert the image in the lower-left position

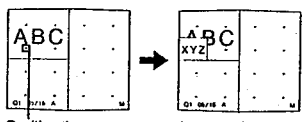
When you select 8 in step 2



Position the cursor (blinking) to this position by pressing the ⇦ or ⇨ button.

Image which appears after the CAPTURE button has been pressed.

When you select 16 in step 2



Position the cursor (blinking) to this position by pressing the ⇦ or ⇨ button.

Image which appears after the CAPTURE button has been pressed.

② Press the CAPTURE button at the instant the image you want to insert appears.

The image is stored to the position selected in step ①.

4 Press the MULTI PICTURE button.

The full-size image with an insert appears on the video monitor.

5 Press the PRINT button.

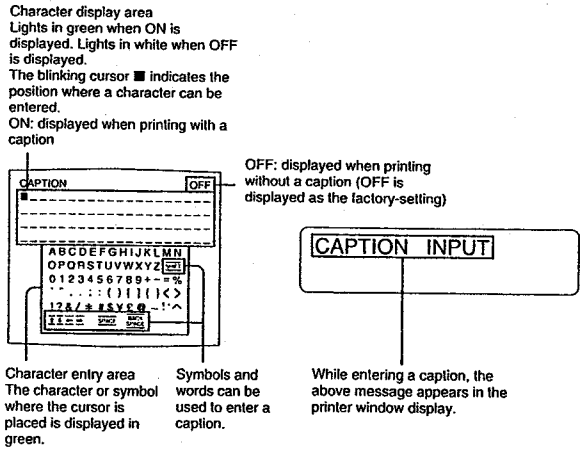
The image with an insert is printed.

1-7. MAKING PRINTOUTS WITH A CAPTION

A caption, such as data or comments, can be added to a printout below the image. You can input up to 80 characters. When using the computer via the RS-232C interface, you can input up to 160 characters on two lines from the computer.

About the CAPTION menu

A caption is entered from the CAPTION menu. A brief explanation of each item of the CAPTION menu is given below.



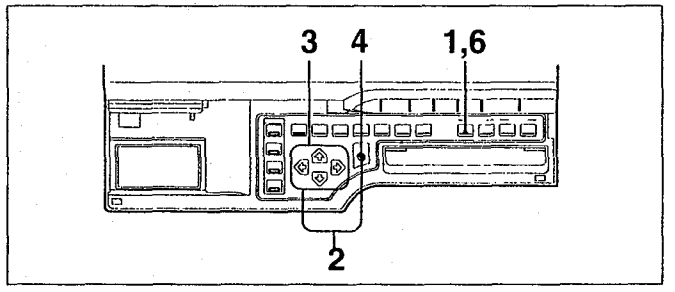
Symbols and words can be used to enter a caption

Monitor display	Function
SPACE	One space
BACK SPACE	One backspace
SHIFT*	Selecting either capital letters or lower-case letters

* By highlighting SHIFT in green and pressing the EXEC button, capital letters are changed to lower-case letters, or lower-case letters are changed to capital letters.

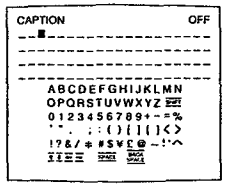
Entering a Caption

Enter a caption as follows. The setting remains effective until you enter a new setting - even if you turn the power off.



1 Press the CAPTION INPUT button.
The right screen appears.

CAPTION input-menu



2 Position the cursor to the point where you want to enter the character in the character display area.

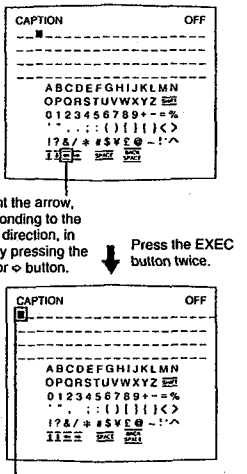
To move the cursor:

① Select the arrow corresponding to the direction in which you want to move the green cursor ■ in the character display area by pressing the ⇧ ,⇩ ⇦ or ⇨ button.
② Press the EXEC button.
Each time you press the EXEC button, the cursor ■ moves one position in the designated direction.

Note

When the character display area is displayed in white, the CAPTION input mode is set to OFF. Thus, you cannot add a caption to the printouts. ("Making printouts with a caption" on page 37)

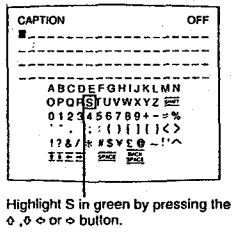
Example: To move the cursor to the left by two positions.



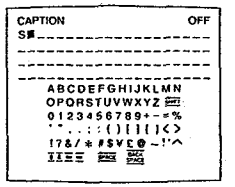
Continue to next page →

3 Select the character you want to enter by pressing the ⇧ ,⇩ ⇦ or ⇨ button.

Example: To select S.



4 Press the EXEC button.
The character selected in step 3 appears at the point to which the green cursor ■ is positioned in the character display area, after which the cursor ■ moves to the next position.



When you enter the wrong character

Select BACK SPACE by pressing the ⇧ ,⇩ , ⇦ or ⇨ buttons, then press the EXEC button. The character to the left of highlighted character will be deleted. Whenever you press the EXEC button, the cursor moves back deleting the highlighted letters, one by one.

5 Repeat steps **2**, **3** and **4** to enter the remaining characters of the caption.

To enter a space

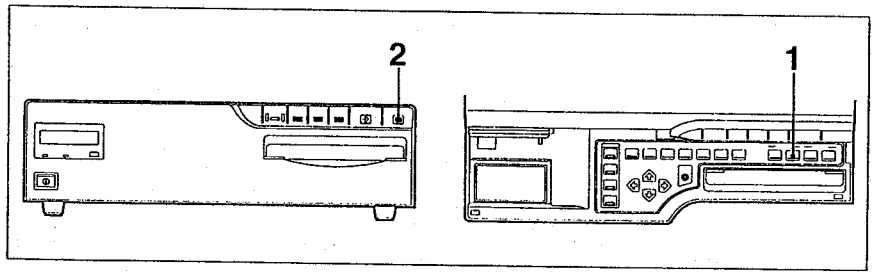
① Position the green cursor ■ to the point where you want to enter a space.
② Select SPACE by pressing the ⇧ ,⇩ , ⇦ or ⇨ button.
③ Press the EXEC button.
A single space is entered and the green cursor ■moves to the next position.

To replace a previously entered character without changing the number of characters

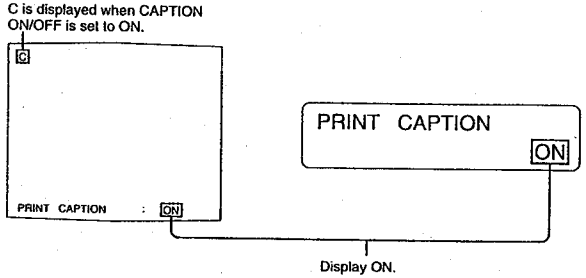
You can replace a previously entered character with a new one.
① Position the green cursor ■ to the character to be replaced by performing the operations explained in step **2**.
② Overwrite the invalid character with the correct character by performing the operations explained in steps **3** and **4**.
The previously entered character is replaced with the new one.

6 Press the CAPTION INPUT button.
The regular screen appears.

Making printouts with a caption



1 Press the CAPTION ON/OFF button to display ON.
Whenever you press the CAPTION ON/OFF button, the setting is toggled.
The screen is reset to the regular screen after a few seconds.



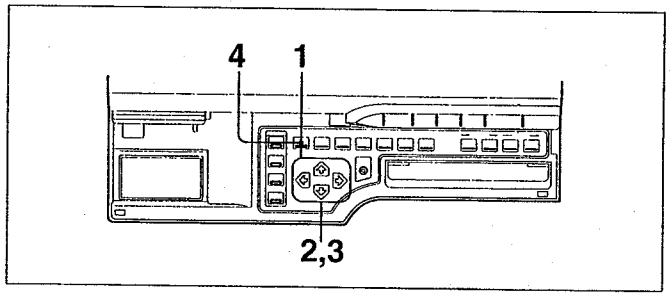
Making a printouts without a caption
Press the CAPTION ON/OFF button to display OFF instead of ON.

2 Press the PRINT button.
A printout with a caption is output.

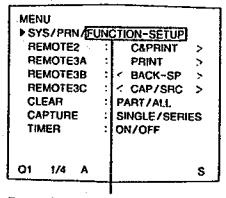
1-8. DELETING THE IMAGES STORED TO MEMORY PAGES

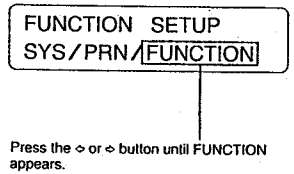
You can delete images stored to memory pages, either individually or as a group, by using the CLEAR button.
Whether images are deleted individually or as a group depends on the setting of CLEAR on the FUNCTION-SETUP menu.

Setting the Function of the CLEAR Button

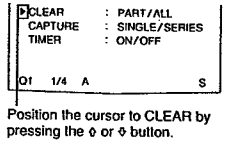


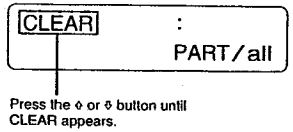
1 Press the MENU button, then select FUNCTION-SETUP from the displayed menu by pressing the ⇦ or ⇨ button.



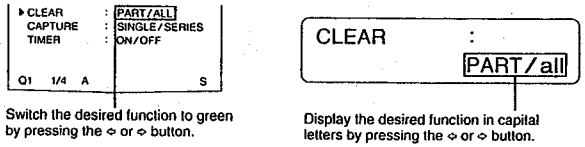


2 Select CLEAR by pressing the ⇧ or ⇩ button.





3 Select the function of the CLEAR button by pressing the ⇦ or ⇨ button.



Function of the CLEAR button	Settings
To delete all images stored in the printer	ALL
To delete images individually	PART

Once you set the function of the CLEAR button, the CLEAR button functions according to the setting until the function setting is changed.

4 Press the MENU button.
The regular screen appears.

Deleting Images

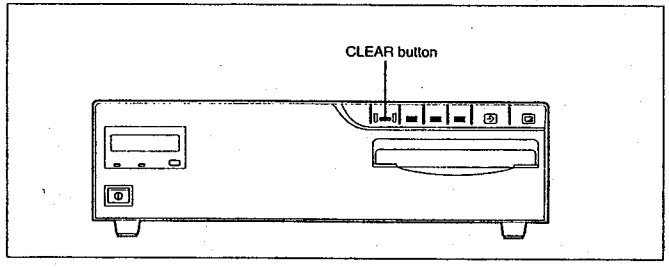
Deleting all Images stored in the printer as a group

Before deleting images

Set CLEAR to ALL on the FUNCTION-SETUP menu.

Note

You cannot restore images once they have been deleted.



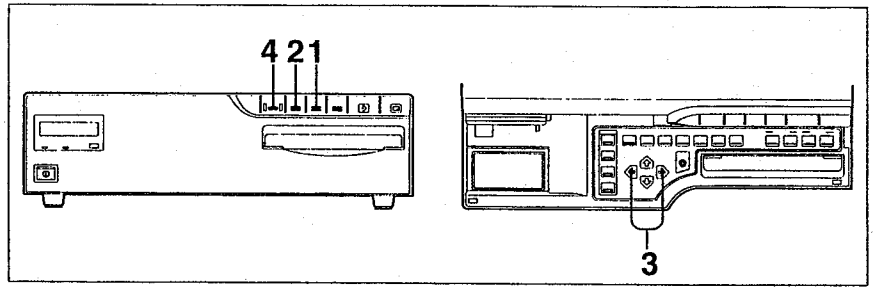
Press the CLEAR button.
All images stored in the printer are deleted together.

Deleting certain of multiple images in a single memory page

You can delete unwanted images from a single memory page.

Before deleting images

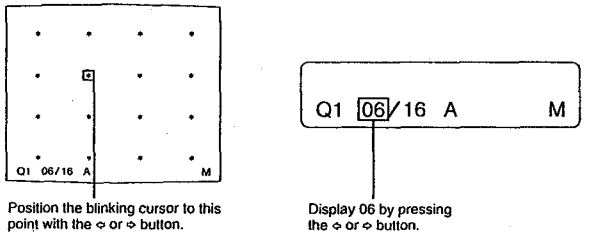
Set CLEAR to PART on the FUNCTION-SETUP menu.



1 Press the SOURCE/MEMORY button when the source image is displayed on the video monitor screen.
The image stored in memory is displayed on the screen.

2 Select the memory page, in which the images to be deleted are stored, by pressing the MEMORY PAGE button.

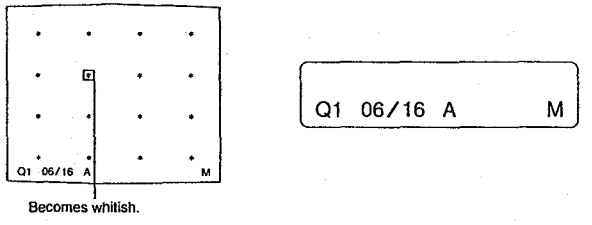
3 Select the image to be erased by pressing the ⇦ or ⇨ button.
Example: To delete the sixth image of 16 reduced images



Note

When the menu is displayed on the video monitor screen, you cannot select the image by pressing the ⇦ or ⇨ button. Press the MENU button so that the menu disappears.

4 Press the CLEAR button.
The image selected in the step **3** is deleted.



5 Repeat steps **3** and **4** until you have deleted all the images you want to delete.

6 Repeat steps **2**, **3**, **4** and **5** if you want to delete other images in another memory page.

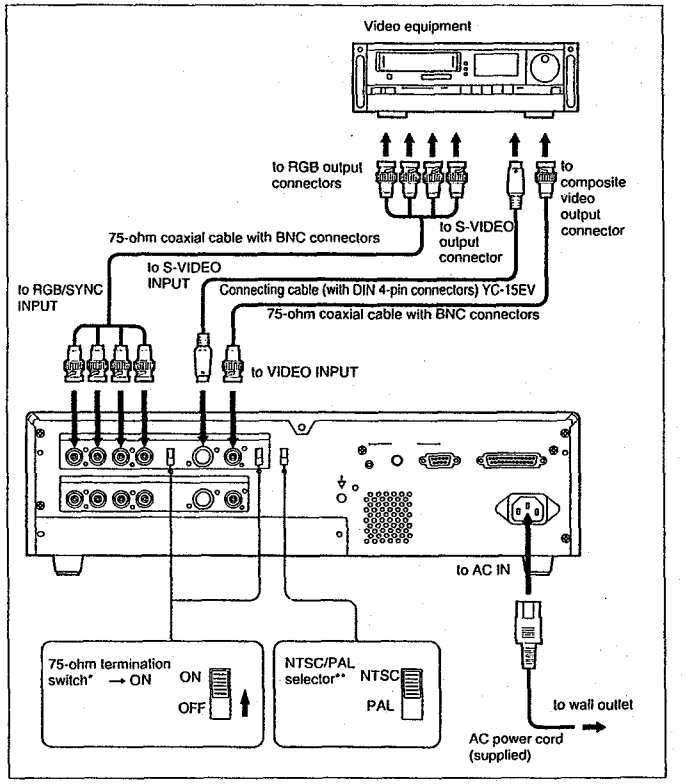
To enable printing, video equipment to act as an input signal source, and a video monitor to display images or menus must be connected.
The following diagrams illustrate how to make the input, output and remote control connections. Use this as a guide when connecting the necessary signals to and from the equipment to be used for printing.

Notes

- Turn off the power of each device before attempting to make any connections.
- Connect the AC power cord last.

Making Connections for Storing Video Images

Connect the video equipment providing the video images to be printed.
Connect the video equipment which will be used in actual printing, using the following diagram as a guide.
Before connecting the video equipment, see "Important safeguards/notices for use in the medical environment" on page 2.

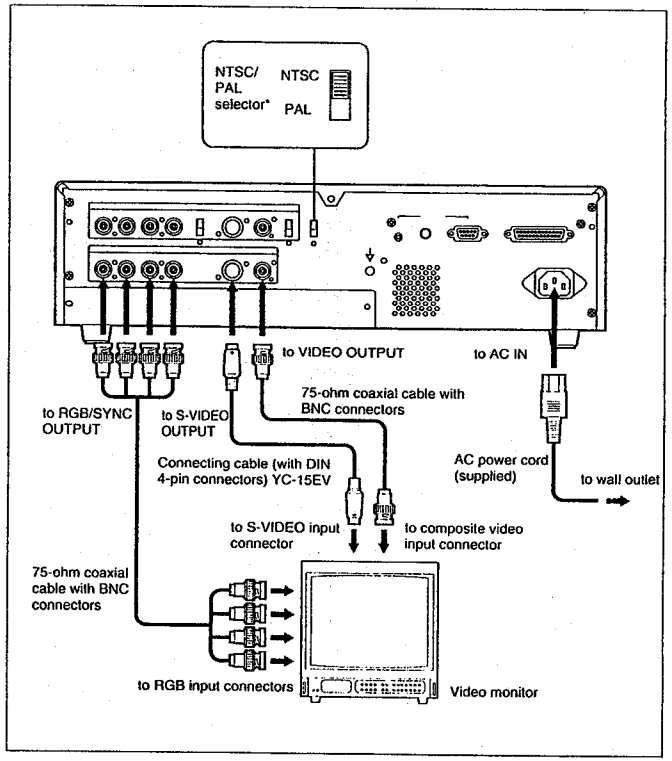


* Normally, set this switch to ON. Set it to OFF if the level of the input signal drops when you connect additional video equipment.

** • Set the NTSC/PAL selector to your TV system.
To switch the TV system, turn the power off once, then change the setting. If you change the setting with the power on, this mode will not be switched.
• The UPK-5501NP Memory Board should be mounted if you use the printer in PAL mode. (see page 93)

Making Connections for Viewing Images to be Printed on the Video Monitor

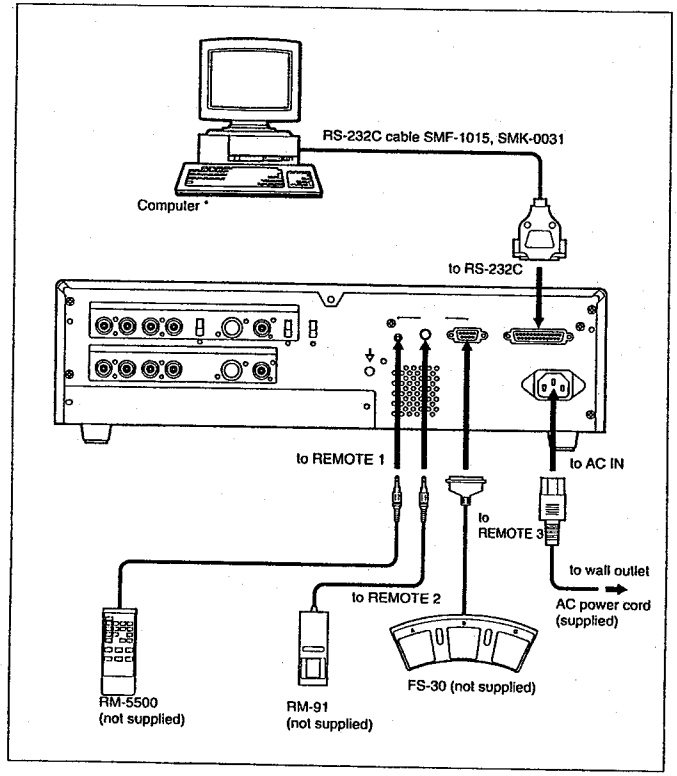
Connect a video monitor to view stored images and to check those to be printed. Connect the necessary video monitor which will be used in actual printing, using the following diagram as a guide.
Before connecting the video equipment, see "Important safeguards/notices for use in the medical environment" on page 2.



* • Set the NTSC/PAL selector to your TV system.
To switch the TV system, turn the power off once, then change the setting. If you change the setting with the power on, the mode will not be switched.
• The UPK-5501NP Memory Board should be mounted to enable use of the printer in PAL mode. (see page 93)

Making Connections to Enable Remote Control

The printer can be controlled remotely by connecting the RM-5500 Remote Control Unit (not supplied), RM-91 Remote Control Unit (not supplied), the FS-30 Foot Switch (not supplied) or the personal computer.

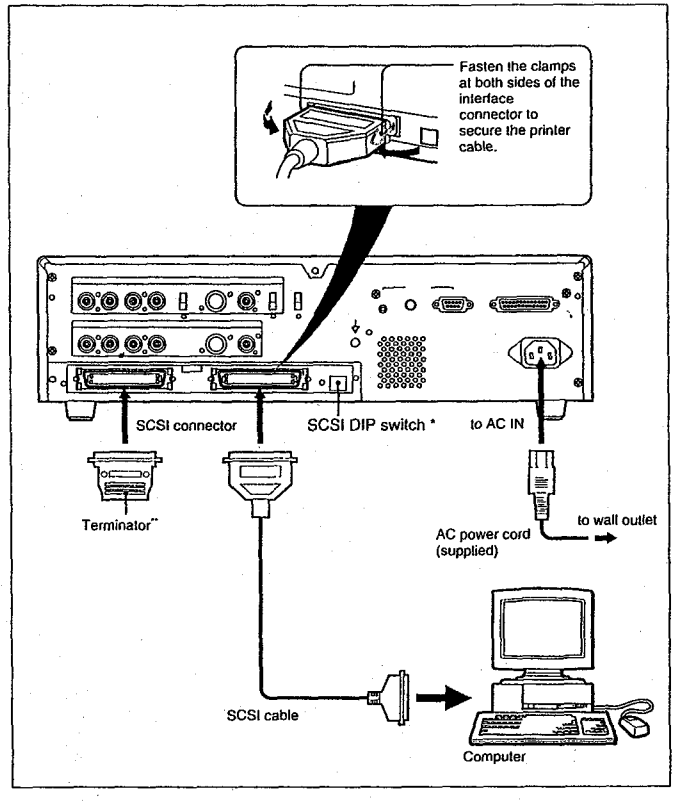


* When connecting a personal computer, select the appropriate baud rate from the SYSTEM-SETUP menu ("Setting the Baud Rate for Computer Communication" page 75)

Making Connections For Printing Images Created on the Computer

The UPK-5502SC Digital Interface Board (not supplied) allows you to make a printout of a computer image by using the personal computer with a graphical application software program.

For detailed information on the UPK-5502SC Digital Interface Board (not supplied), read the instruction manuals supplied with the UPK-5502SC.



* Up to seven SCSI devices can be connected to the SCSI bus by using a daisy chain configuration. Each device is identified by ID number from 0 to 7.
For details of how to set the DIP switch and connections between the computer and the printer, refer to the instruction manuals supplied with the UPK-5502SC Digital Interface Board and the computer.

** To transfer data between SCSI devices, you have to connect terminators at both ends of daisy chain connection. When one of the two SCSI connectors of the printer is not used, connect the SCSI terminator to the other vacant SCSI connector.

1-10. SETTING UP THE PRINTER

You can set up the printer specification and store three sets of values as user set 1, 2 and 3. Once you have adjusted and stored, the printer operates according to the selected user setting until those values are modified. You can set up the printer according to the intended purpose, connected equipment or your individual preferences.
There are 4 menus that are used to set up the printer. The menus and functions that can be set with those menus are as follows.

Menu	Functions to be set	Reference page
ANALOG SETUP	• Compensating for the input signals. • Matching the video monitor color to the printout color.	51, 54
COLOR ADJUST SETUP	Adjusting the printout color (color intensity and contrast).	59
SYSTEM-SETUP	• Erasing the screen display. • Erasing the printer window display and adjusting the brightness of the printer window display. • Selecting whether the operation and error tones sound. • Setting the baud rate for computer communication. • Registering the user setting.	69, 71, 74, 75, 77
PRINT-SETUP	• Selecting whether white borders are added to multiple reduced images. • Making copies of the same image on a single printout of multiple reduced images. • Adjusting the printout quality.	30, 31, 57, 63
FUNCTION-SETUP	• Selecting operation mode for automatic printing capabilities of remote commanders connected to REMOTE 2 and REMOTE 3 connectors. • Erasing the images stored into memory. • Selecting whether multiple reduced images are automatically stored at regular intervals . • Selecting the image which appears after storing the image into memory, source image or memory image.	25, 38, 66
SIZE SHIFT SETUP *	• Changing the printout area. • Changing the printout size.	63

* The SIZE SHIFT SETUP menu is displayed by pressing the EXEC button after selecting ASPECT on the PRINT-SETUP menu.

This section explains the following settings and adjustments.

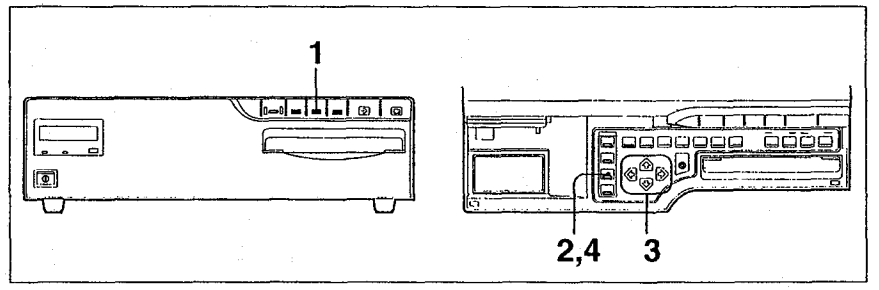
- Compensating for the input signals (page 51)
- Matching the video monitor color to the printout color (page 54)
- Adjusting the sharpness (page 57)
- Adjusting the printout color (page 59)
- Changing the printout size/printout area (page 63)
- Selecting the operating mode for automatic printing capability (page 66)
- Erasing the screen display (page 69)
- Erasing the printer window display and adjusting the printer window display brightness (page 71)
- Selecting whether to enable the operation and error tones (page 74)
- Setting the baud rate for computer communication (page 75)
- Registering the printer settings and adjusted values as a user setting (page 77)

Compensating for the Input Signals

A video image recorded under poor conditions may be of poor color quality. If the signal is an NTSC or PAL composite video signal or separate luminance (Y) and chrominance (C) signals, you can correct the color and level of the input signal to a certain extent.

Note

You cannot adjust an image once it has been stored in memory. Restore an image after adjustment.

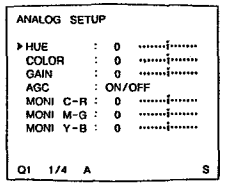


1 When the memory image is displayed on the screen, press the SOURCE/MEMORY button.
The image from the video source appears.

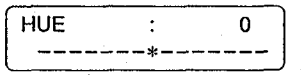
Continue to next page →

2 Press the ANALOG button.
The following screen appears.

ANALOG SETUP menu



Part of the ANALOG SETUP menu



3 Perform the adjustments as follows.
① Select the adjustment item by pressing the ⇳ or ⇳ button.
② Perform the adjustment by pressing the ⇔ or ⇔ button.

To adjust the color intensity, hue and contrast

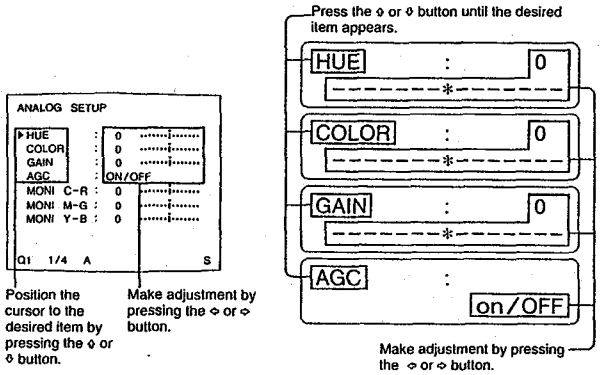
Adjustment	Menu adjustment item	Button and operation result	
		⇔ button	⇔ button
Hue*	HUE **	The hue becomes greenish.	The hue becomes purplish.
Color intensity	COLOR **	The color intensity strengthens.	The color intensity weakens.
Contrast	GAIN	The contrast strengthens.	The contrast weakens.

* In PAL mode, no HUE adjustment is provided on the ANALOG SETUP menu.
** Adjust the color such that skin tones appear natural. For the COLOR and HUE adjustment, you can correct the color intensity and hue of an NTSC composite video signal or a separated luminance (Y) and chrominance (C) signal.

When the printout or monitor image appears blakish or whitish

Adjust the input signal to the optimum level for printing.

Menu adjustment item	Selection	When selecting
AGC (Automatic Gain Control)	OFF	Normal (when the proper signal is input)
	ON	When the printout or monitor image appears blackish or whitish.



4 Press the ANALOG button.
The regular screen appears.

Matching the Video Monitor Color to the Printer Color

To match the color of the monitor image to that of the printout, adjust the monitor and printer colors such that the monitor color is the same as that of the printout. The printer outputs either of two kinds of video signals according to the printer settings.

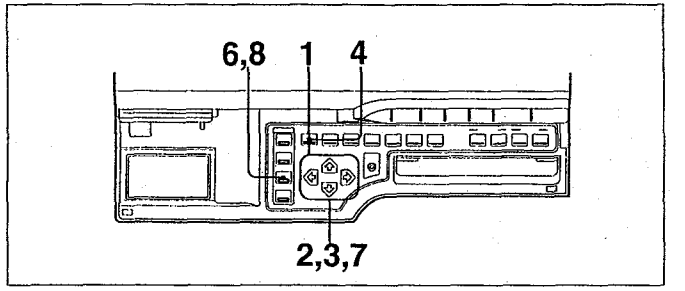
- EE (E to E): Signals are output to the monitor after being processed by the printer's circuitry.
- THRU (through): Signals are output to the monitor as is.

Before adjusting the printout color

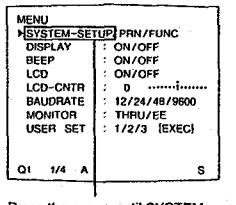
The monitor color may not be adjusted correctly even if the printer color is correctly adjusted. Check the color of the video monitor before adjusting the printout color. In such a case, use the THRU signal.
After adjusting the color of the video monitor using video monitor controls, adjust the color of the printer's output signal.

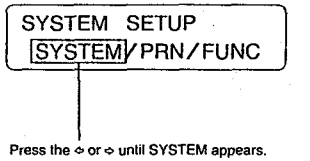
Note

This adjustment is performed to adjust the color of the printer output signal when the monitor color is unsatisfactory. This adjustment does not affect the printout itself. To adjust the color of the printout, see "Adjusting the Sharpness" on page 57 and "Adjusting the Printout Color" on page 59)

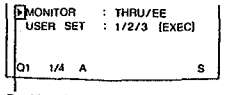


1 Press the MENU button, then select SYSTEM-SETUP by pressing the ⇳ or ⇳ button.

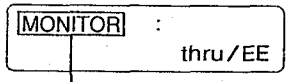




2 Select MONITOR by pressing the ⇳ or ⇳ button.

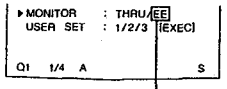


Position the cursor to MONITOR by pressing the ⇳ or ⇳ button.

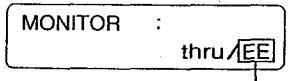


Display MONITOR by pressing the ⇳ or ⇳ button.

3 Select EE by pressing the ⇳ or ⇳ button.



Switch EE to green by pressing the ⇳ or ⇳ button.



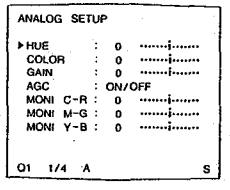
Display EE in capital letters by pressing the ⇳ or ⇳ button.

4 Press the MENU button.
The regular screen appears.

5 Store a new image into memory and make a printout.
Adjust the settings by comparing the printout with the image on the monitor.

6 Press the ANALOG button.
The following screen appears.

ANALOG SETUP menu

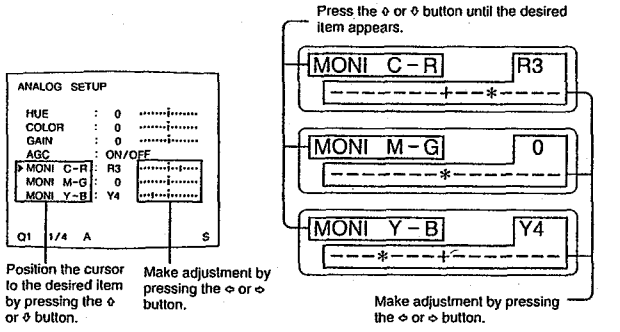


Part of the ANALOG SETUP menu

7 Adjust the monitor while comparing the printout with the image on the monitor.
① Select the adjustment item by pressing the ⇳ or ⇳ button.
② Perform adjustment by pressing the ⇳ or ⇳ button.

Continue to next page →

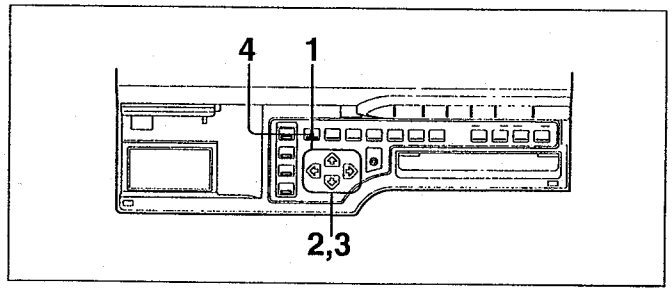
Menu Adjustment item	When selecting	Button to be pressed	Adjustment direction on the menu
MONI C-R	To make the screen become reddish	⇳ button	Toward R (red)
	To make the screen become cyan (blue)	⇳ button	Toward C (cyan)
MONI M-G	To make the screen become greenish	⇳ button	Toward G (green)
	To make the screen become magenta (pink)	⇳ button	Toward M (magenta)
MONI Y-B	To make the screen become bluish	⇳ button	Toward B (blue)
	To make the screen yellowish	⇳ button	Toward Y (yellow)



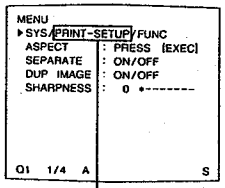
8 Press the ANALOG button.
The regular screen appears.

Adjusting the Sharpness

You can set the printout sharpness to any of 8 levels. The printout will appears softer or sharper depending on the definition of the subject outline. The image on the monitor is not affected by changing the sharpness settings. This adjustment affects only the quality of the printout. The setting remains effective until reset - even if you turn the power off.



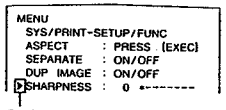
1 Press the MENU button, then select PRINT-SETUP by pressing the ⇦ or ⇨ button.



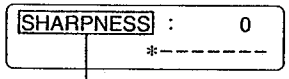
Press the ⇦ or ⇨ button until PRINT-SETUP appears.

Press the ⇦ or ⇨ button until PRINT appears.

2 Select SHARPNESS by pressing the ⇧ or ⇩ button.



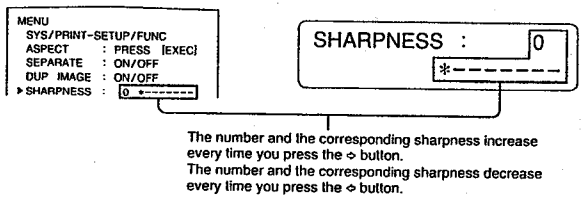
Position the cursor to SHARPNESS by pressing the ⇧ or ⇩ button.



Press the ⇧ or ⇩ button until SHARPNESS appears.

Continue to next page →

3 Select the desired sharpness by pressing the ⇦ or ⇨ button.
You can set the sharpness to any of 8 steps from 0 to +7. On a setting of step 4 corresponds to the standard sharpness.



The number and the corresponding sharpness increase every time you press the ⇨ button.
The number and the corresponding sharpness decrease every time you press the ⇦ button.

When selecting	Content of settings
To make a soft outline	Toward step 0
To make a normal outline	Centered (step 4)
To make a sharp outline	To the right (toward step 7)

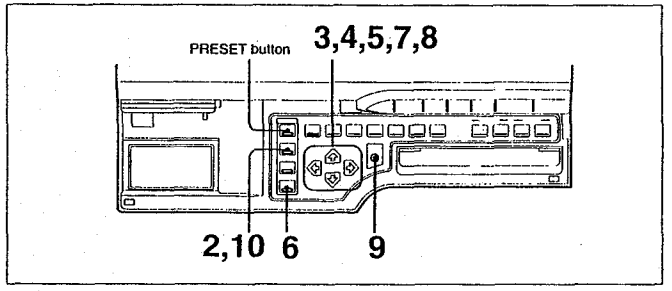
Note

When you make a printout of the image of the digital signal sent from the computer via the UPK-5502SC Digital Interface Board (not supplied), the printout of the signal sent from the computer without being compensated in the printer is made if you set the sharpness to step 0.

4 Press the MENU button.
The regular screen appears.

Adjusting the Printout Color

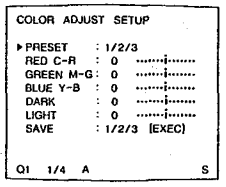
You can adjust the color intensity (RED/GREEN/BLUE) and contrast (DARK/LIGHT). You can store up to three settings for each user setting. Thus, up to 9 variations of color intensity and picture contrast setting can be stored.
These settings are managed according to the PRESET number. The color intensity and picture contrast of a printout are determined by recalling one of the three settings according to their PRESET numbers. Settings can be registered as Preset 1, 2 and 3 for each user settings. The printer retains these settings - even if you turn off the printer power. This is useful when you are using more than one item of video equipment, each having different characteristics, when you want to print images having different color qualities and picture contrast, and when multiple users access a single printer.
Also, you can make a printout using temporarily set values, without erasing the stored adjustment values.
Perform the adjustments while viewing the images stored in memory.
All values are factory-set to 0 for PRESET numbers 1, 2 and 3.



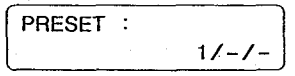
1 Display the stored image on monitor for adjustment.

2 Press the R/G/B/D/L button.
The following screen appears.

COLOR ADJUST SETUP menu

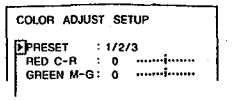


Part of COLOR ADJUST SETUP menu

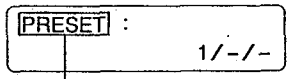


Continue to next page →

3 Select PRESET by pressing the ⇳ or ⇳ button.

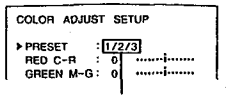


Position the cursor to PRESET by pressing the ⇳ or ⇳ button.

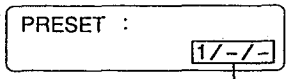


Press the ⇳ or ⇳ button until PRESET appears.

4 Select the PRESET number of the values to be adjusted or to be modified by pressing the ⇔ or ⇔ button.



Switch the desired PRESET number to green.



Press the ⇔ or ⇔ button until the desired PRESET number appears.

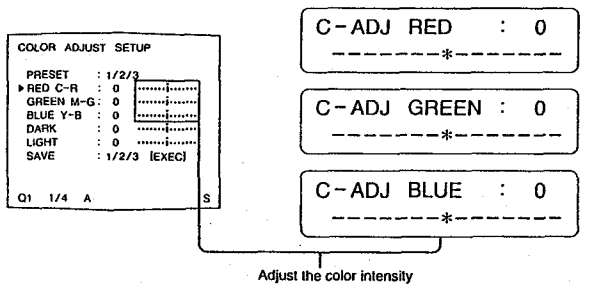
When modifying, you can preserve the original settings. (See "To retain the originally set value" on page 62.)

5 Adjust the printout color.
① Select the item to be adjusted by pressing the ⇳ or ⇳ button.
② Perform the adjustment by pressing the ⇔ or ⇔ button.

The RED, GREEN and BLUE color component and contrast settings are divided into 15 steps, from -7 to +7, indicated by a value and graph. The center of the graph corresponds to the standard color.

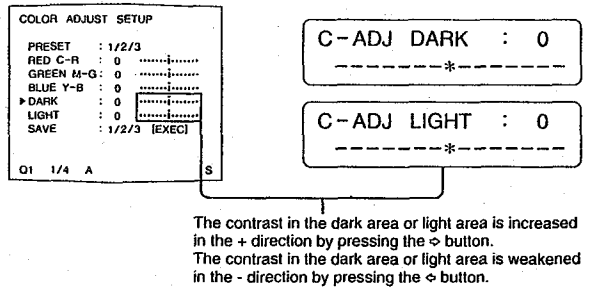
When adjusting the RED/GREEN/BLUE (color intensity)

Menu Adjustment item	When selecting	Button to be pressed	Adjustment direction on the menu
RED C-R	To make the image reddish	⇔ button	Toward R (red)
	To make the image cyan (blue)	⇔ button	Toward C (cyan)
GREEN M-G	To make the image greenish	⇔ button	Toward G (green)
	To make the image magenta (pink)	⇔ button	Toward M (magenta)
BLUE Y-B	To make the image bluish	⇔ button	Toward B (blue)
	To make the image yellowish	⇔ button	Toward Y (yellow)



When adjusting DARK/LIGHT (contrast)

Adjustment item	When selecting
DARK	To adjust the dark area of an image
LIGHT	To adjust the light area of an image



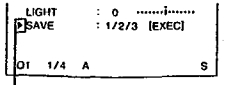
Once you have changed the value

Once you have changed the value, TEMP (temporary) appears on the menu screen. TEMP indicates that the settings are temporary and have not yet been stored.

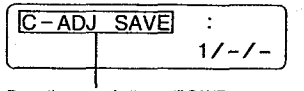
Continue to next page →

6 Once you have made all necessary adjustments, check your presetting by pressing the REVIEW button.
While the REVIEW button is held down, the display is cleared from the screen.
The results of the adjustment can thus be viewed easily.
You can make a printout with the settings made as explained above.

7 Select SAVE by pressing the ⇳ or ⇵ button.

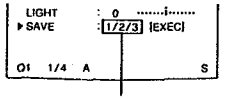


Position the cursor to SAVE by pressing the ⇳ or ⇵ button.

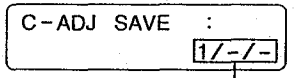


Press the ⇳ or ⇵ button until SAVE appears.

8 Select the SAVE number to which new settings are to be stored by pressing the ⇔ or ⇨ button.



Switch the desired SAVE number to green.



Press the ⇔ or ⇨ button until the desired SAVE number appears.

To retain the originally set value

Select a SAVE number which is different from the PRESET number selected in step **4**.

9 Press the EXEC button.
The settings are registered to the SAVE number selected in step **8**.
TEMP disappears from the menu.

10 Press the R/G/B/D/L button.
The regular screen appears.

To copy the settings made for one certain PRESET number to another PRESET number.

1 Select the source PRESET number for which the settings to be copied are stored on the COLOR ADJUST SETUP menu.

2 Select the target SAVE number to which data is to be copied.

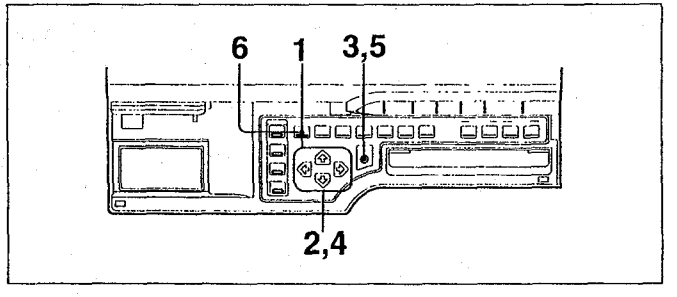
3 Press the EXEC button.
Settings stored to the PRESET number selected in step **1** are copied to the SAVE number selected in step **2**.

To recall the PRESET number in which printout color settings (color intensity and contrast) are stored

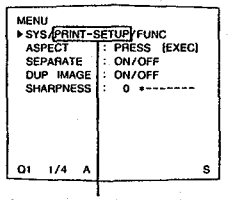
Press the PRESET button.
The data of the currently selected PRESET number appears. Repeatedly pressing the PRESET button causes the PRESET number to change in the order of 1, 2 and 3.

Changing the Printout Size/Printout Area

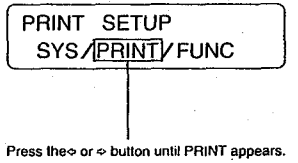
When you print an image that is narrower or wider than the standard screen size, a black frame may be printed or the image may be partially cut. In such a case, you can change the screen size. Or, a black line may be produced on the printout even though it does not appear on the video monitor. Any portion for which there is no video signal is printed in black. This may occur when you make printouts after connecting a different video source or play back different video software. In such a case, you can adjust the printout area by moving the screen either horizontally or vertically. When a black frame appears around the printout, even after the printout area has been shifted, narrow the printout size because the image has been overscanned beyond the range of the regular screen.



1 Press the MENU button, then select PRINT-SETUP by pressing the ⇦ or ⇨ button.

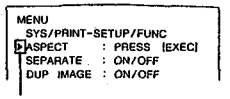


Press the ⇦ or ⇨ button until PRINT- SETUP appears.

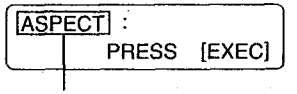


Press the⇦ or ⇨ button until PRINT appears.

2 Select ASPECT by pressing the ⇧ or ⇩ button.



Position the cursor to ASPECT by pressing the ⇧ or ⇩ button.



Press the ⇧ or ⇩ button until ASPECT appears.

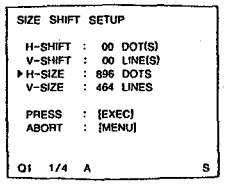
Continue to next page →

Note

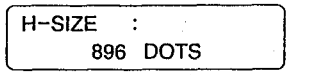
If you select ASPECT, then perform the following step, all images stored in the memory pages will be cleared. You can not keep these stored images.

3 Press the EXEC button.
The following screen appears.

SIZE SHIFT SETUP menu



Part of SIZE SHIFT SETUP menu



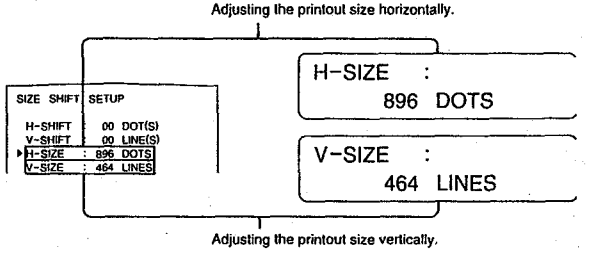
4 Adjust the printer according to the obtained printout.

① Select the item to be adjusted by pressing the ⇧ or ⇩ button.
② Perform the adjustment by pressing the ⇦ or ⇨ button.

When a black frame is printed or the image is partially cut

Adjust the printout size by using the H-SIZE and V-SIZE items from the menu.

When selecting	Adjustment item	Button to be used	Adjustment result
To change the size, adjust the position of the right edge. The left edge remains fixed. (The screen size changes horizontally.)	H-SIZE	⇨ button	Widened at the right edge.
		⇦ button	Narrowed with the left edge remaining fixed.
To change the size, adjust the position of the bottom edge. The top edge remains fixed. (The screen size changes vertically.)	V-SIZE	⇨ button	Enlarged downwards.
		⇦ button	Vertical sized reduced with the top edge remaining fixed.

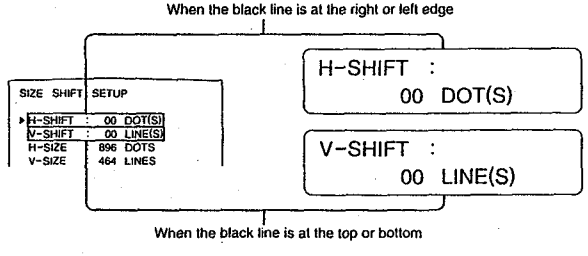


When a black line appears on the printout

Example: When the black line is on the right

Adjust the printout area according to the position of the line on the printout, by using the H-SHIFT and V-SHIFT items on the menu.

Position where the black line appears	Menu adjustment item	Button to be used	Adjustment result
On the right	H-SHIFT (horizontal direction)	⇨ button	The image position shifts to the right with the size remaining as is.
On the left		⇦ button	The image position shifts to the left with the sized remaining as is.
At the top	V-SHIFT (vertical direction)	⇦ button	The image position shifts up with the size remaining as is.
At the bottom		⇨ button	The image position shifts down with the size remaining as is.



To clear the adjusted value

Press the MENU button from the SIZE SHIFT SETUP menu. The adjusted values are cleared and the values are reset to the original ones, then the PRINT-SETUP menu appears.

Note

When a black line still appears, even after adjusting H-SHIFT or V-SHIFT, change the printout size.

5 Press the EXEC button.
The adjusted results have been stored. The PRINT-SETUP menu appears.

6 Press the MENU button.
The regular screen appears.

To check the adjustment result

Store a new image and print it to check that no black frame appears on the printout, that the image is not partially cut, and that no black line appears.

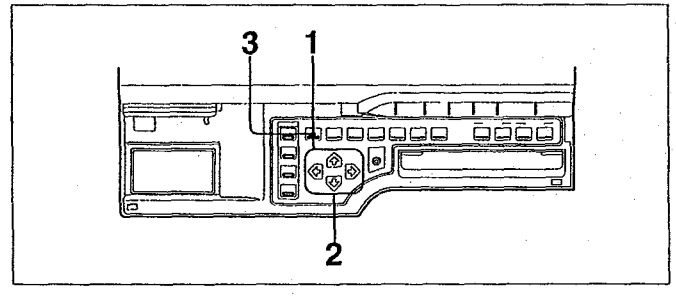
Selecting the Operation Mode for Automatic Printing Capabilities

You can control the printer with either of the following options.
- RM-91 Remote Control Unit (not supplied): Connected to REMOTE 2 connector ("Making Connections to Enable Remote Control" page 48)
- FS-30 Foot Switch (not supplied): Connected to REMOTE 3 connector ("Making Connections to Enable Remote Control" page 48)

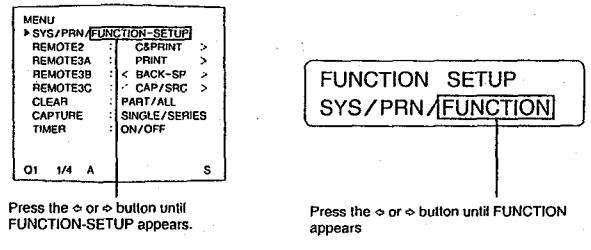
Using the menu, you can assign desired functions to the remote control unit connected to the REMOTE 2 connector, and to the switches of the foot switch connected to the REMOTE 3 connector.
In addition to the above, the printer can be remotely controlled by a pulse signal input to REMOTE 2 or REMOTE 3. (see pages 84 and 85)

Note

To control the printer remotely, set CAPTURE of the FUNCTION-SETUP menu to SINGLE. (see page 26)



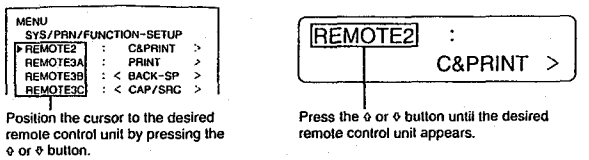
1 Press the MENU button, then select FUNCTION-SETUP by pressing the ⇦ or ⇨ button.



2 Select the remote control unit to which you want to assign a function.

① Select the remote control unit to which you want to assign a function by pressing the ⇳ or ⇳ button.

Remote control unit to which the function is assigned		Remote control unit name written on the menu
RM-91 connected to REMOTE 2		REMOTE 2
FS-30 connected to REMOTE 3	Button A of FS-30	REMOTE 3A
	Button B of FS-30	REMOTE 3B
	Button C of FS-30	REMOTE 3C

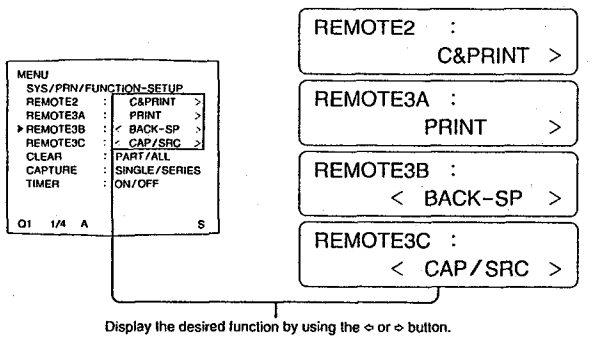


The figure shows the case where you want to assign a function to the remote control unit connected to REMOTE 2. You can select any remote control unit in the same way.

Continue to next page →

② Assign a function to the remote control unit selected in ① by using the ⇳ or ⇳ button.

Items to be selected	Operation
C & PRINT (CAPTURE & PRINT)	Storing an image to a memory page and printing a memory image. If you press the switch while printing is being performed, the selected image is queued, with the queued image being printed once printing has been completed.
CYCLIC-C (CYCLIC CAPTURE)	Storing images to memory pages cyclically whenever you press the switch. The printer continues to store images, replacing that previously stored with a new one.
CAP & STOP (CAPUTRE STOP)	Storing images to one memory page to another. Once images have been stored to all the memory pages, the printer stops storing images and the message HIT ANY KEY appears.
PRINT	Printing whenever you press the switch.
STOP	Stopping printing whenever you press the switch. An paper which is currently being printed will be ejected.
BACK-SP (BACK SPACE)	The pointer (green) returns to its former position whenever you press the switch.
POINTER+	The pointer (green) moves to the next position whenever you press the switch.
CAP/SRC (CAPTURE/SOURCE)	When the source image is displayed, the image is captured to memory whenver you press the switch. When the memory image is displayed, the source image appears whenever you press the switch.



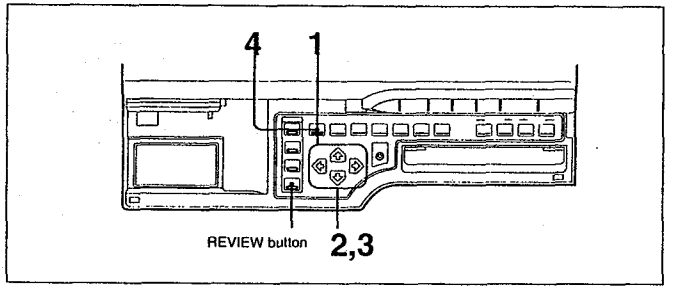
When > is displayed, another function can be selected by pressing the ⇳ button.
When < and > are displayed, another function can be selected by pressing either the ⇳ or ⇳ button.

Assign functions to your remote control unit by repeating ① and ②.

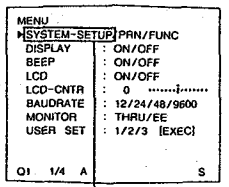
3 Press the MENU button.
The regular screen appears.

Erasing the Screen Display

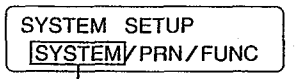
You can erase a screen display with the menu when, for example, it is hard to see the image that is hidden behind the screen display (C, Qn, A, and others). The printer operation is identical, regardless of whether screens are displayed. The same messages are displayed in the printer window display.



1 Press the MENU button, then select SYSTEM-SETUP by pressing the ⇦ or ⇨ button.

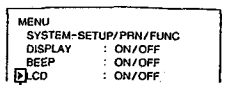


Press the ⇦ or ⇨ button until SYSTEM- SETUP appears.

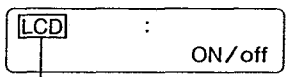


Press the ⇦ or ⇨ button until SYSTEM appears.

2 Select DISPLAY by pressing the ⇧ or ⇩ button.



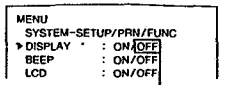
Position the cursor to DISPLAY by pressing the ⇧ or ⇩ button.



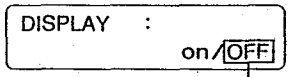
Press the ⇧ or ⇩ button until DISPLAY appears.

Continue to next page →

3 Select OFF by pressing the ⇦ or ⇨ button.



Switch OFF to green by pressing the ⇦ or ⇨ button.



Display OFF in capital letters by pressing the ⇦ or ⇨ button.

To display screen messages

Select ON in step **3**.

Note

If you set the printer output signal specification to THRU (through), screen messages do not appear, even when you switch ON to green. However, error messages can appear at any time.

4 Press the MENU button.
The regular screen appears.

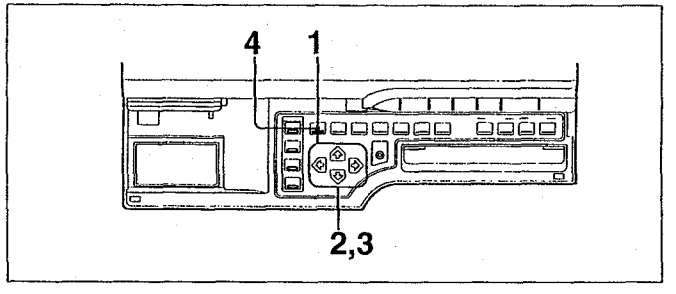
To temporarily erase the monitor display

While the REVIEW button on the sub panel is held down, the screen display disappears, even if DISPLAY is set to ON. Upon releasing the REVIEW button, the screen display appears again.

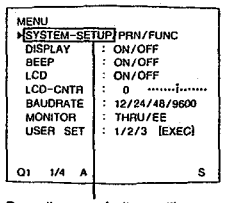
Erasing the Printer Window Display/Adjusting its Brightness

Using the menu, you can erase the printer window display. Printer operation remains identical, regardless of whether messages are displayed in the printer window display. You can always view messages on the video monitor. When it is hard to read the contents of the printer window display, adjust the brightness with the menu.

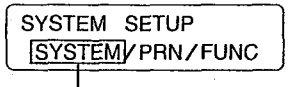
Erasing the printer window display



1 Press the MENU button, then select SYSTEM-SETUP by pressing the ⇦ or ⇨ button.

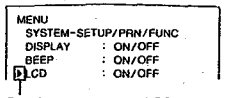


Press the⇦ or ⇨button until SYSTEM- SETUP appears.

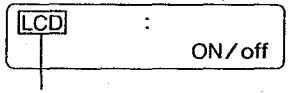


Press the ⇦ or ⇨ button until SYSTEM appears.

2 Select LCD by pressing the ⇧ or ⇩ button.



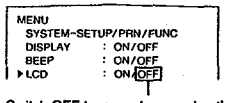
Position the cursor to LCD by pressing the ⇧ or ⇩ button.



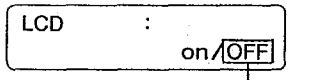
Press the ⇧ or ⇩ button until LCD appears.

Continue to next page →

3 Select OFF by pressing the ⇦ or ⇨ button.



Switch OFF to green by pressing the ⇦ or ⇨ button.

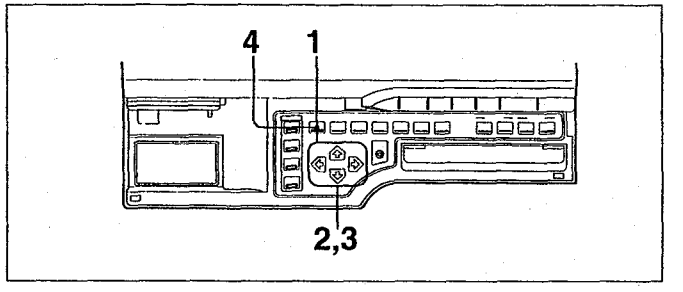


Display OFF in capital letters by pressing the ⇦ or ⇨ button.

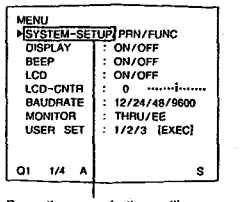
To display printer window display
Select ON in step **3**.

4 Press the MENU button.
The regular screen appears.

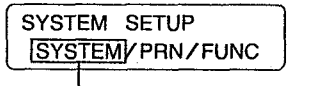
Adjusting the brightness of the printer window display



1 Press the MENU button, then select SYSTEM-SETUP by pressing the ⇦ or ⇨ button.

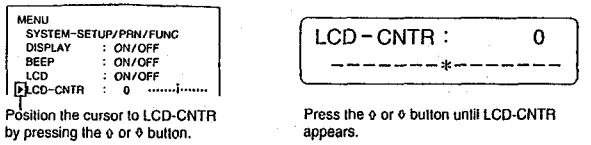


Press the⇦ or ⇨ button until SYSTEM-SETUP appears.



Press the ⇦ or ⇨ button until SYSTEM appears.

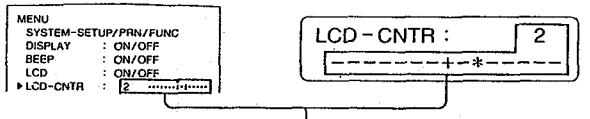
2 Select LCD-CNTR by pressing the ↑ or ↓ button.



Position the cursor to LCD-CNTR by pressing the ↑ or ↓ button.

Press the ↑ or ↓ button until LCD-CNTR appears.

3 Adjust the brightness of the printer window display by pressing the ← or → button.

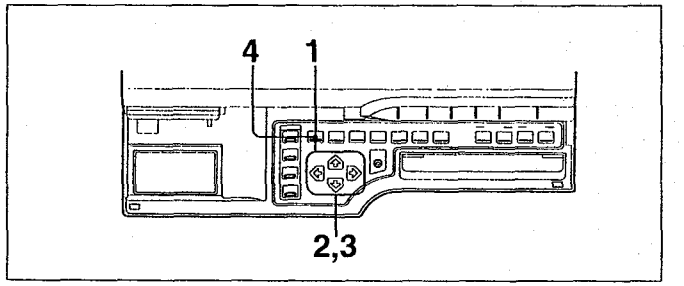


The number increases and the contrast increases every time the → button is pressed.
The number decreases and the contrast decreases every time the ← button is pressed.

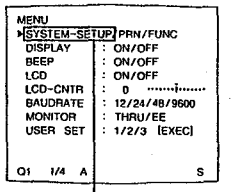
4 Press the MENU button.
The regular screen appears.

Selecting Whether the Operation and Error Tones Sound

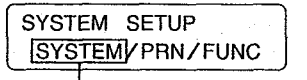
Whenever you press a button on the front panel or sub panel, the operation tone sounds (one time). When an error occurs, the alarm tone sounds (three times). You can turn these tones on and off with menu.



1 Press the MENU button, then select SYSTEM-SETUP by pressing the ← or → button.

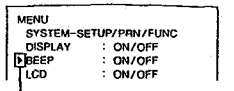


Press the ← or → button until SYSTEM- SETUP appears.

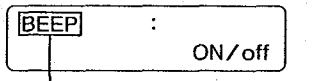


Press the ← or → button until SYSTEM appears.

2 Select BEEP by pressing the ↑ or ↓ button.

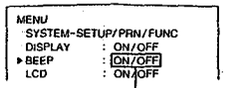


Position the cursor to BEEP by pressing the ↑ or ↓ button.

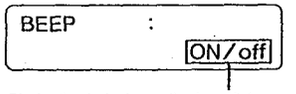


Press the ↑ or ↓ button until BEEP appears.

3 Select whether the operation and error tones sound by pressing the ⇦ or ⇨ button.



Switch the desired operation to green by pressing the ⇦ or ⇨ button.



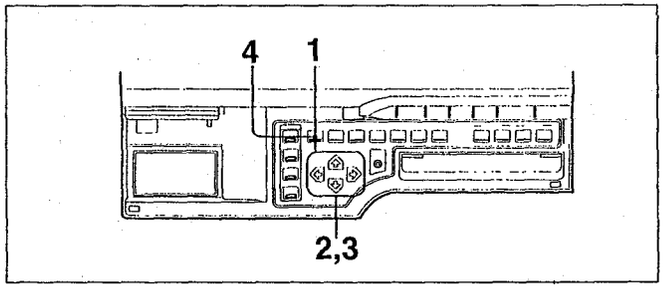
Display the desired operation in capital letters by pressing the ⇦ or ⇨ button.

When selecting	Selection
To sound the tones	ON
To disable the tones	OFF

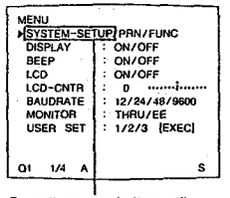
4 Press the MENU button.
The regular screen appears.

Setting the Baud Rate for Computer Communication

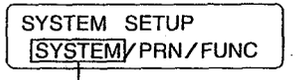
When controlling the printer with a computer connected to the printer's RS-232C connector, select the appropriate baud rate. For details, contact your nearest Sony dealer.



1 Press the MENU button, then select SYSTEM-SETUP by pressing the ⇦ or ⇨ button.



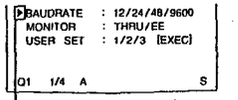
Press the ⇦ or ⇨ button until SYSTEM-SETUP appears.



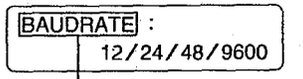
Press the ⇦ or ⇨ button until SYSTEM appears.

Continue to next page →

2 Select BAUDRATE by pressing the ⇧ or ⇩ button.

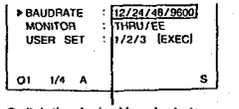


Position the cursor to BAUDRATE by pressing the ⇧ or ⇩ button.

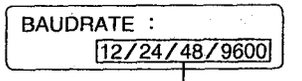


Press the ⇧ or ⇩ button until BAUDRATE appears.

3 Select the desired baud rate by pressing the ⇦ or ⇨ button.



Switch the desired baud rate to green by pressing the ⇦ or ⇨ button.



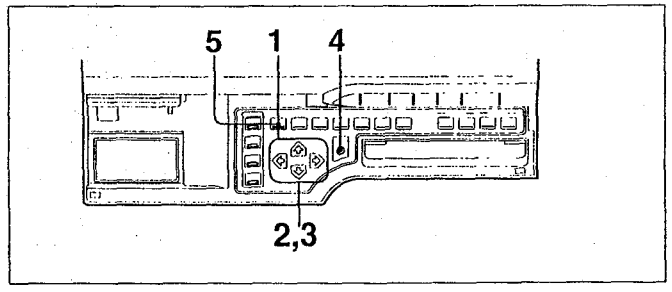
Display the desired baud rate in capital letters by pressing the ⇦ or ⇨ button.

Baud rate (bps)	Baud rate displayed on the menu. (The display changes from upper-two digit indication to spelled-out indication.)
1200	12 → 1200
2400	24 → 2400
4800	48 → 4800
9600	96 → 9600

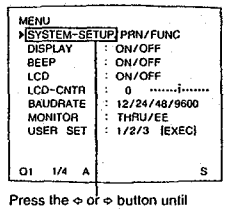
4 Press the MENU button.
The regular screen appears.

Registering a User Set

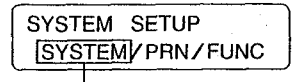
You can store up to three settings of all the printer specifications, set or adjusted by using the buttons or with the menu, and store those settings as a user set. The printer retains these setting - even if you turn off the power.
Thus, different operators can make printouts with different settings by recalling the appropriate user set.
If the data of the recalled user set is modified, the printer operates according to the modified data. In such a case, the modified data remains effective until another user set is recalled with the USER PRESET button, even if you turn off the power.



1 Press the MENU button, then select SYSTEM-SETUP by pressing the ⇦ or ⇨ button.

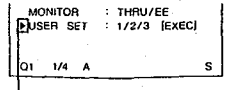


Press the ⇦ or ⇨ button until SYSTEM- SETUP appears.

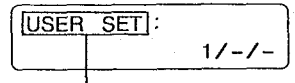


Press the ⇦ or ⇨ button until SYSTEM appears.

2 Select USER SET by pressing the ⇧ or ⇩ button.



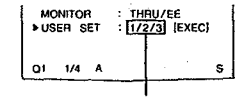
Position the cursor to USER SET by pressing the ⇧ or ⇩ button.



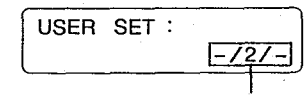
Press the ⇧ or ⇩ button until USER SET

Continue to next page →

3 Select the desired user set number by pressing the ⇦ or ⇨ button.



Switch the desired user set number to green by pressing the ⇦ or ⇨ button



Display the desired user set number with spelled-out by pressing the ⇦ or ⇨ button.

4 Press the EXEC button.
All data currently set and adjusted are registered in the user set selected in step **3**.

5 Press the MENU button.
The regular screen appears.

To recall the user set and print

Select the desired user set by pressing the USER PRESET button. Each time you press the USER PRESET button, the user sets are recalled in the order of 1, 2, 3, 1....
Then, press the EXEC button to execute the selected user set.
The printer operates according to the recalled user set. If you modify the set value, the printer operates according to the modified data until you recall another user set.

Note
If the user set is changed, the image in memory will be cleared.

To retain the originally set value

Example: Modify the settings made for user set 1. Retain the original settings of user set 1 and register the modified set values as user set 2.

1 Select user set 1 by pressing the USER PRESET button.
Each time you press the USER PRESET button, the user sets are recalled in the order of 1, 2, 3, 1....

2 Press the EXEC button to execute the selected user set.

Note
If the user set is changed, the image in memory will be cleared.

3 Modify the recalled set values.

4 Select 2 of USER SET on the SYSTEM-SETUP menu.

5 Press the EXEC button.
The set values, modified in step **3**, are registered as user set 2.

To copy the existing user set

You can copy an existing user set to another user set number.

1 Select the source user set number by pressing the USER PRESET button.

2 Press the EXEC button to execute the selected user set.

Note

If the user set is changed, the image in memory will be cleared.

3 Select the target user preset number with USER SET on the SYSTEM-SETUP menu.

4 Press the EXEC button.

The set values of the source user set, selected in step **1**, are copied to the target user set number selected in step **3**.

1-11. PRECAUTIONS

Safety

- Operate the printer using the power source specified in "Specifications" (page 83)
- Be careful not to damage the power cable by placing or dropping heavy objects on it; it is dangerous to use the unit with a damaged power cable.
- If you do not intend to use the unit for a long time, disconnect the power cable.
- Unplug the power cable by grasping the plug, not the cable itself.
- Do not disassemble the unit.
- Do not remove the cover. There is a danger of electric shock from the internal parts.
- Be careful not to spill water or other liquids on the unit, or to allow combustible or metallic material to enter the cabinet. If used with foreign matter in the cabinet, the unit is liable to fail, or present a risk of fire or electric shock.
- Ventilation holes are provided to prevent the unit from overheating. Be careful not to obstruct them with other units or by covering the unit with a cloth etc.
- If the unit malfunctions or if a foreign body falls into the cabinet, disconnect the power immediately and consult your Sony service facility or your Sony dealer.

Installation

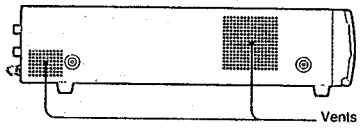
- Avoid placing the unit in a location subject to:
  - mechanical vibration
  - high humidity
  - excessive dust
  - direct or excessive sunlight
  - extremely high or low temperatures
- Do not use other electronic equipment near the unit. The unit will not work properly in strong electromagnetic fields.

Condensation

- If the printer is subject to wide and sudden changes in temperature, such as when it is moved from a cold room to a warm room or when it is left in a room with a heater that tends to produce large amounts of moisture, condensation may form inside the printer. In such cases the printer will probably not work properly, and may even develop a fault if you persist in using it. If condensation forms, turn off the power and leave the printer to stand for at least one hour.
- If the printing pack is subjected to wide and sudden changes in temperature, condensation may form on the ink ribbon or paper. This will cause the printer to malfunction. Also, if the printing pack is used in this state, spots are likely to appear on the printout. Therefore, avoid storing the printing pack in locations subject to wide and sudden changes of temperature.
- To store a half-used printing pack, replace it in its original packing and reseal the package. If possible, keep the sealed printing pack in a cool, dark location. To subsequently use the printing pack, place it, in its sealed package, in a warm room for several hours. Doing so prevents condensation from forming when the printing pack is removed from its package.

Location

To prevent internal heat built-up, leave enough room around the printer for air to circulate through the vents on the left hand side of the cabinet.



On transportation

Do not transport the printer with the supplied accessories. Doing so may cause malfunction.

Cleaning

Clean the cabinet, panel and controls with a soft dry cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzine, which may damage the finish.

1-12. INK RIBBON AND PAPER

Both paper and an ink ribbon cassette are necessary for printing. ("Ink ribbon cartridge" consists of the supplied ink ribbon holder loaded with ink ribbon.) Use the ink ribbon with the paper contained in the same package. If the printer detects an incompatible combination, an error message appears in the printer window display and printing is disabled.

UPC-5510 Color Printing Pack

Contains color ink ribbon and paper.
Color ink ribbon 1 roll
A-5 (5 ¾ x 8 ⅜ inches) size paper 100 sheets x 2

UPC-5530 OHP Printing Pack

Contains color ink ribbon and OHP transparencies.
Color ink ribbon 1 roll
A-5 (5 ¾ x 8 ⅜ inches) size OHP 100 sheets

Notes

- Use only the ink ribbon and paper designed for use with this printer. If you use a different type, the printer may not print properly or malfunction.
- Ink ribbon and paper are not re-usable. Once exhaused, replace them with new ones.

1-13. ERROR/WARNING MESSAGES

There are two kinds of messages: error messages and warning messages. This section lists these messages in alphabetical order, together with their possible causes and remedies. Note the message and act accordingly.

Error messages

If a problem occurs, the ALARM lamp lights in orange and an error message stating the problem appears on the monitor and in the printer window display.

Error messages	Possible causes and remedies
NO PAPER	The paper has been exhausted. → Load paper into the paper tray. (see page 11)
NO RIBBON	• The ink ribbon is crumpled in the ink ribbon holder. → Remove the ink ribbon cartridge and reload the ink ribbon into the ink ribbon holder. (see page 8) • The ink ribbon has been torn. → Repair the tear with transparent tape. (see page 10) • The ink ribbon cartridge is loaded into the printer, but the ink ribbon has not been loaded into the ink ribbon holder. → Load the ink ribbon into the ink ribbon holder and reload it. (see page 8)
NO RIBBON AND PAPER	The ink ribbon cartridge is loaded in the printer, but the ink ribbon has not been loaded into the rink ribbon holder, and no paper has been loaded into the paper tray. → Load the ink ribbon into the ink ribbon holder, then load the ink ribbon cartridge, and load the paper into the paper tray. (see pages 8 and 11)
PAPER JAMMING	The paper has jammed. → Remove any jammed paper from the printer. (see page 88)
REMOVE PAPER	The maximum number of printouts has accumulated on the paper cover. → Remove the printouts from the paper cover.
PAPER MISMATCH	The ink ribbon and paper are not compatible. → Use a valid combination of paper and ink ribbon. (see page 82)
RIBBON END	The ink ribbon has been exhaused → Fit a new ink ribbon. (Ink ribbons cannot be reused.) (see page 8)
SENSOR MOTOR TROUBLE	Sensor trouble or motor trouble has occurred. → Turn off the power immediately and contact your Sony service facility or your Sony dealer.

If the message is not cleared, even after performing the above steps

If, after completing the steps given in the above list, the message is not cleared from the video monitor, turn the printer power off, then back on gain. This should allow the printer to again be operated normally.

Warning messages

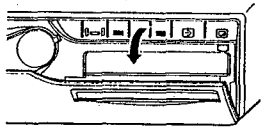
In the case of a warning, only warning messages appear. The ALARM lamp does not light.

Warning message	Possible causes and remedies
BUSY PRINTING	The printer is printing, preventing any other operation. → Wait until the printer finishes printing, then retry the operation.
HEAD IN COOLING	The thermal head has overheated. → Leave the printer until the head cools down and this message disappears.
HIT ANY KEY.	This message appears when the remote control unit is used in CAPTURE STOP mode and when the printer stops storing images to memory pages once images have been stored to all memory pages. → Press any button. Printer operation is enabled after this.
INPUT MISMATCH (displayed on the regular screen) MENU INPUT MISMATCH (displayed on the menu screen)	The TV system of the signal input from the source equipment (VTR, video camera and so on) is not compatible with the TV system selected by the NTSC/PAL switch of the printer. → Check the NTSC/PAL selector setting, and set it correctly.
MEMORY BUSY	The image stored in the selected memory page is being printed or printing is queued. → Retry the operation once the printer finishes printing.
NO INPUT (displayed on the regular screen) MENU NO INPUT (displayed on the menu screen)	The printer is not receiving an input signal. → Set the INPUT SELECT settings correctly. (see page 13) → Check whether the video equipment is outputting a video signal. → Check that the connections between signal source equipment and the printer are secure. (see page 46)
No image in page	No image is stored in the selected memory page. → Store the image into memory page, then press the PRINT button again. (see page 17)
Not enough memory...	The NTSC/PAL selector is set to PAL. To use the printer in NTSC mode, set the NTSC/PAL selector to NTSC. When you change the selector setting, turn the power off, then back on again. To use the printer in PAL mode, mount the UPK-5001NP to increase the memory capacity.

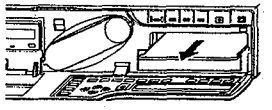
If the paper jams

If the paper jams after pressing the PRINT button, the message "PAPER JAMMING" appears on the video monitor and in the printer window display. Follow the steps below to remove the jammed paper.

1 Open the front panel.

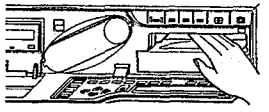


2 Remove the paper cover.



If any printouts have been ejected to the paper tgray, remove them before removing the paper tray.

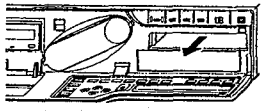
3 Check whether any paper is jammed inside the printer. If you find a jammed sheet, slowly pull it into the printer tray.



Note

Never attempt to pull a jammed sheet down, up, backwards, or forwards: the sheet may tangle or tear.

4 Remove the paper tray.

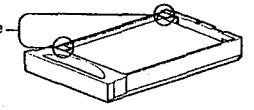


5 Load the paper into the paper tray correctly.

Notes

- Do not reuse the paper put back in step **3**. Discard that paper.
- Use only paper recommnded in this manual.

Set the paper securely under the tab.



6 Reinsert the paper tray and paper cover, then close the front panel.

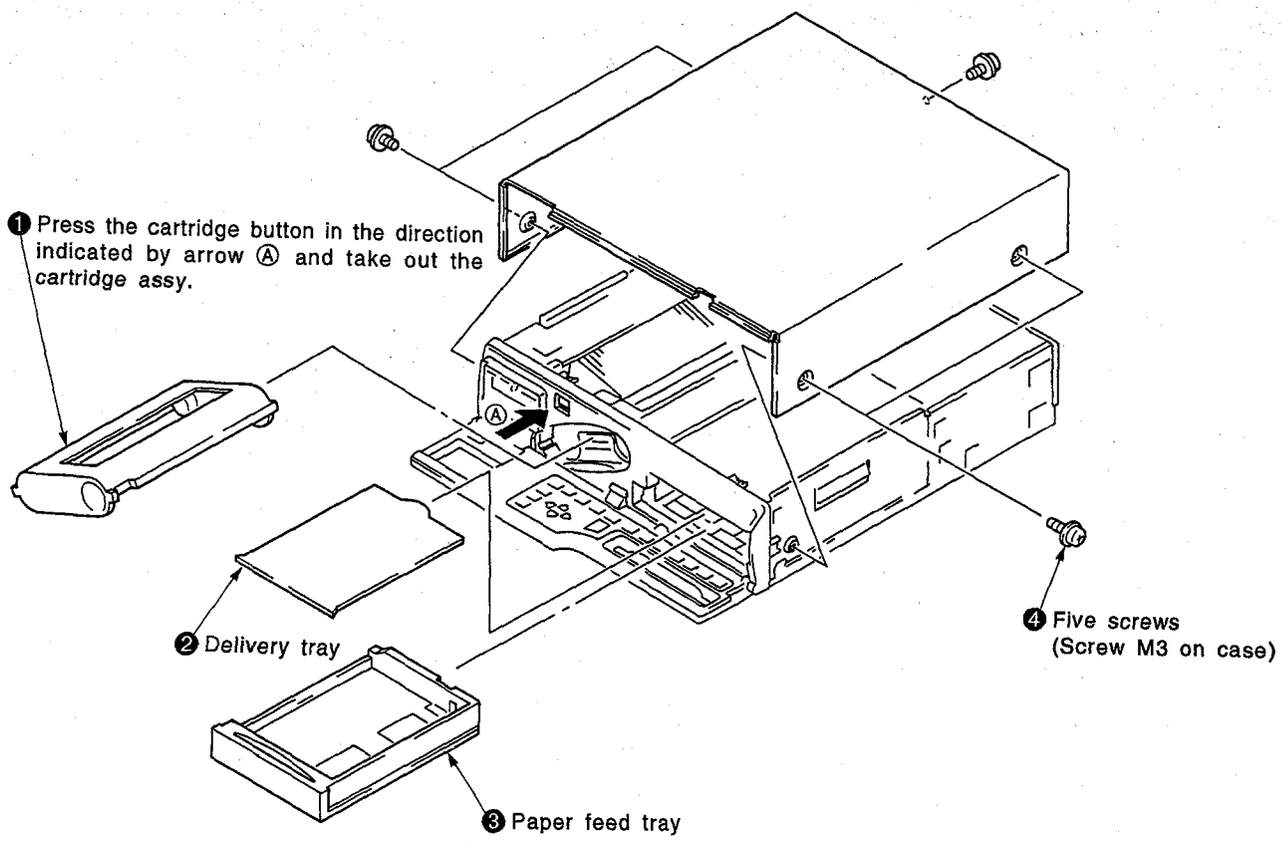
1-14. TROUBLESHOOTING

The following troubleshooting checks will help you correct the most common problems you may encounter with your unit. Before proceeding with these trouble checks, first check that the power cord is firmly connected. Should the problem persist, unplug the unit and contact your Sony dealer or local authorized Sony service facility.

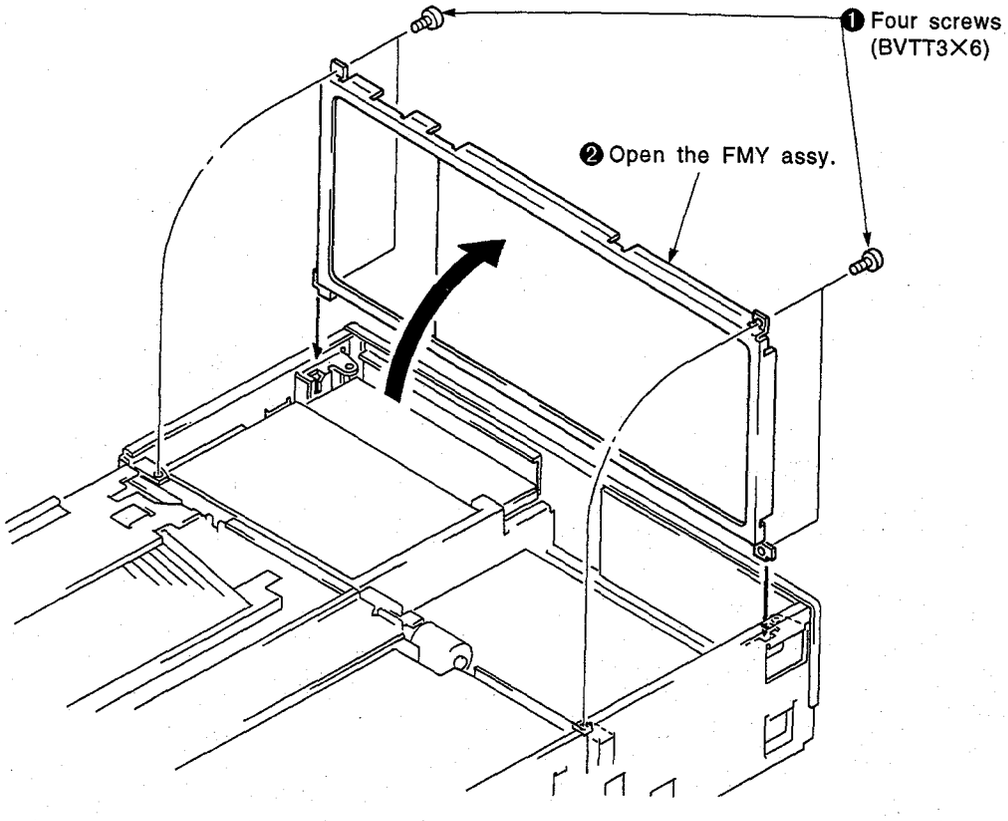
Symptoms	Possible causes and remedies
Nothing appears on the monitor.	• The POWER switch of the printer is not set to ON. → Set the POWER switch of the printer to ON. • The POWER switch of the monitor is not set to ON. → Set the POWER switch of the monitor to ON. • Connections may not be correct. → Check connections and rectify, if necessary. (see page 46)
No message appears on the regular screen.	If an incorrect sync signal is input, nothing may appear on the monitor. → In this case, first check the monitor by pressing the SOURCE/MEMORY button to display the image stored in memory. If an image appears, the monitor is working correctly. Select another input signal by using the INPUT SELECT button (see page 13) Or, set the connected video equipment to playback mode, if it is currently set to another mode such as stop mode.
No message or image appears on the regular screen.	If an image stored in memory appears when the SOURCE/MEMORY button is pressed, MONITOR on the SYSTEM-SETUP menu is set to THRU. → Change the MONITOR setting to EE. (see page 54)
The printer does not print.	• An error message appears on the display. (see page 86) → Perform the steps described in "Error Messages" on page 86. • Paper that cannot be used with the printer has been loaded. → Load the correct paper. (see page 82) Use only ink ribbon and paper for this printer. • The paper is not loaded correctly. → Check which side of the paper is the printing side, then load the paper again. (see page11).
A black line appears on the printout.	Any portion for which there is no signal is printed in black. → Shift the printout area. Store a new image and print it. (see page 63)
The printer produces a printout with black frame.	Any portion for which there is no signal is printed in black. → Make the printout narrower. Store a new image and print it. (see page 63)
The printed image is partially cut out.	Only part of the video signal has been stored. → Make the printout size wider. (see page 63) Store a new image and print it.
The printout is blurred.	A quickly moving image has been stored. → Set MOTION CORRECT mode to MOTION CORRECT ON by pressing the MOTION CORRECT button, and print that image again. (see page 16)
The image displayed on the video monitor is whitish.	The 75-ohm termination switch is set to OFF. → Set the 75-ohm termination switch to ON. (see page 46)
The printout color is very pale.	The paper is not loaded correctly. → Check which side of the paper is the printing side, then load the paper again. (see page 11).

SECTION 2
DISASSEMBLY

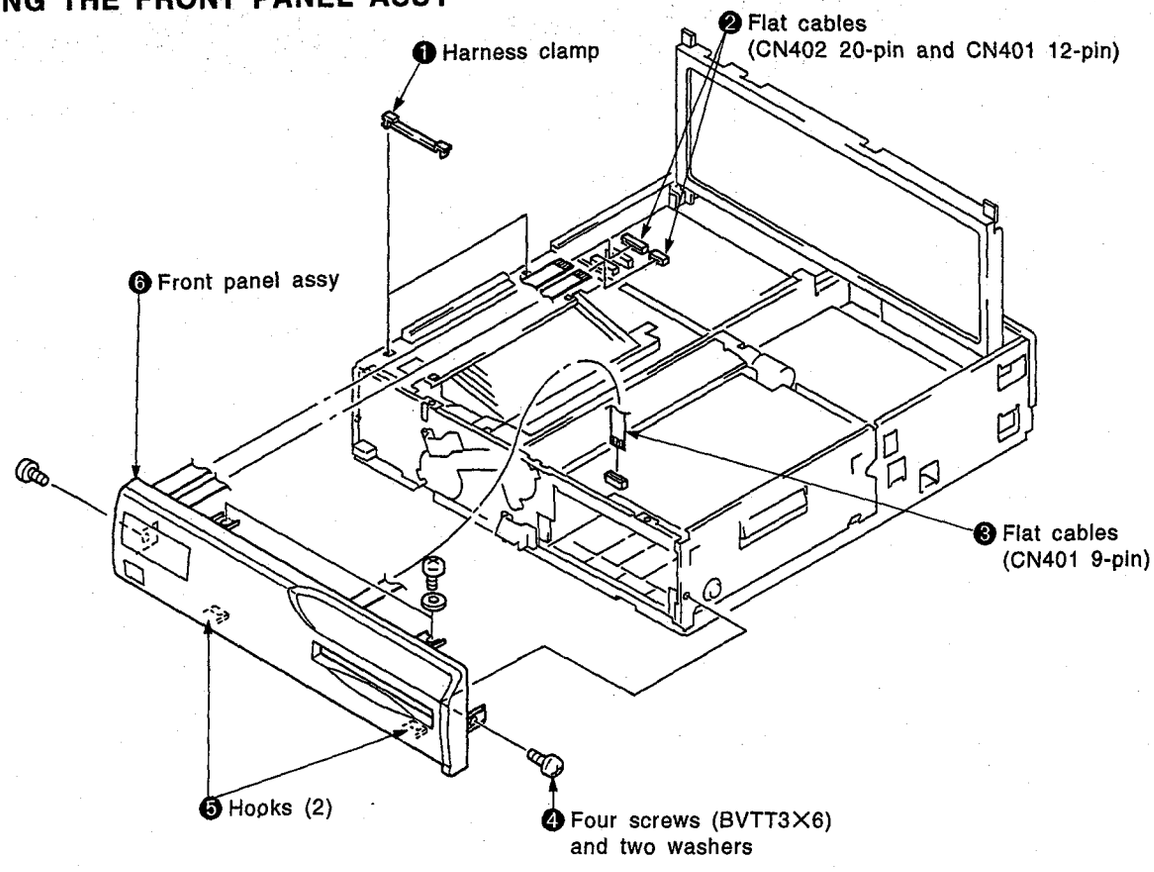
2-1. REMOVING THE CABINET ASSY



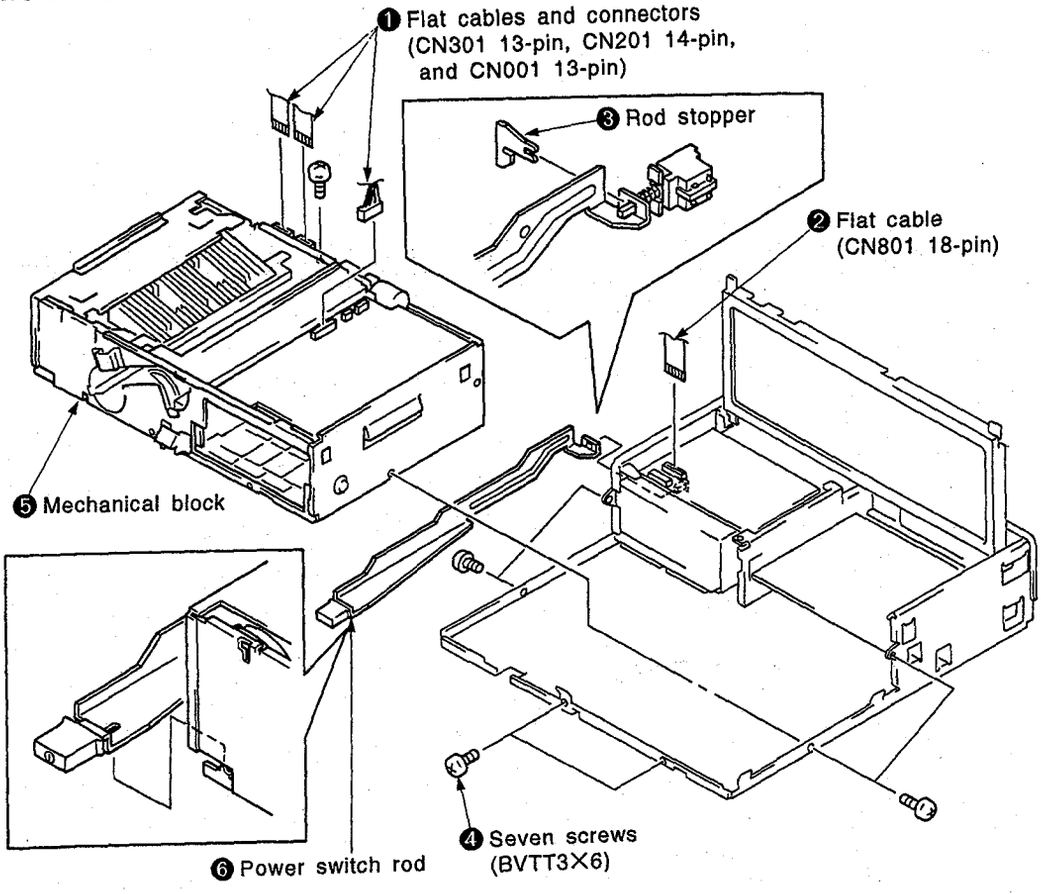
2-2. OPENING THE FMY ASSY



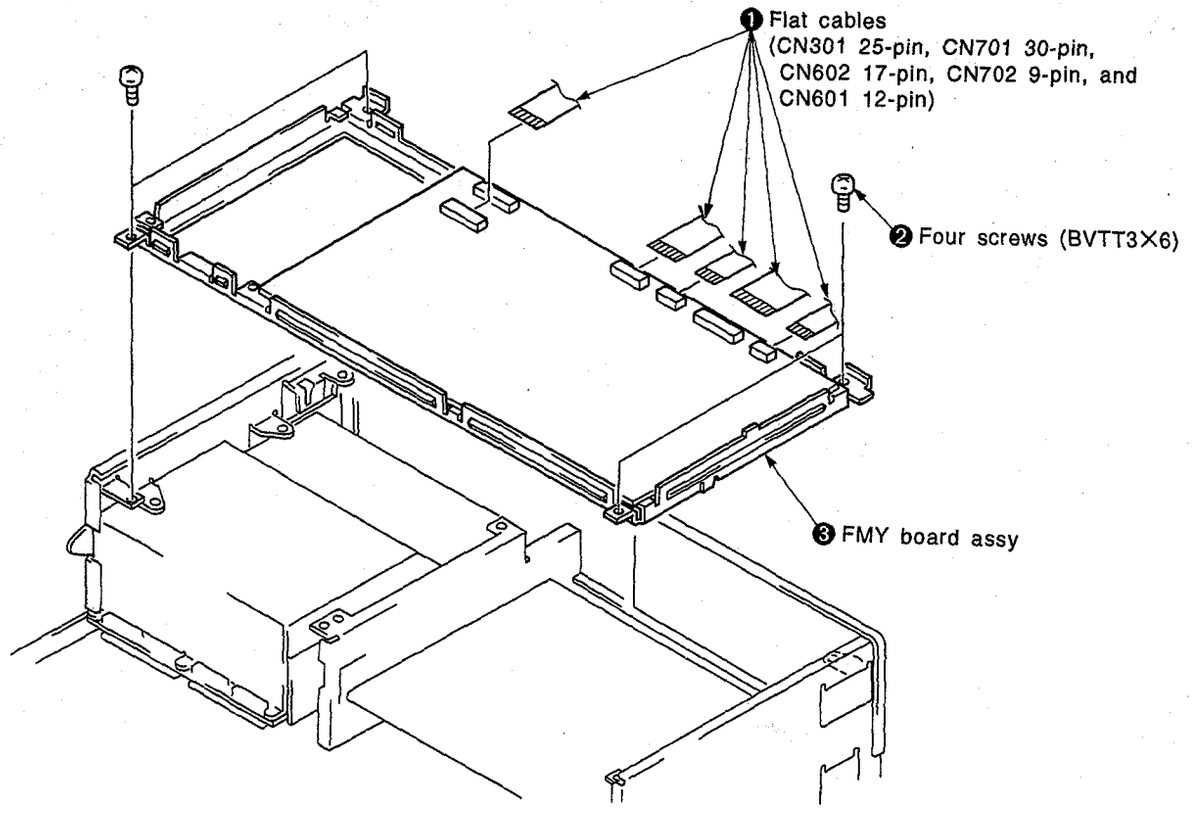
2-3. REMOVING THE FRONT PANEL ASSY



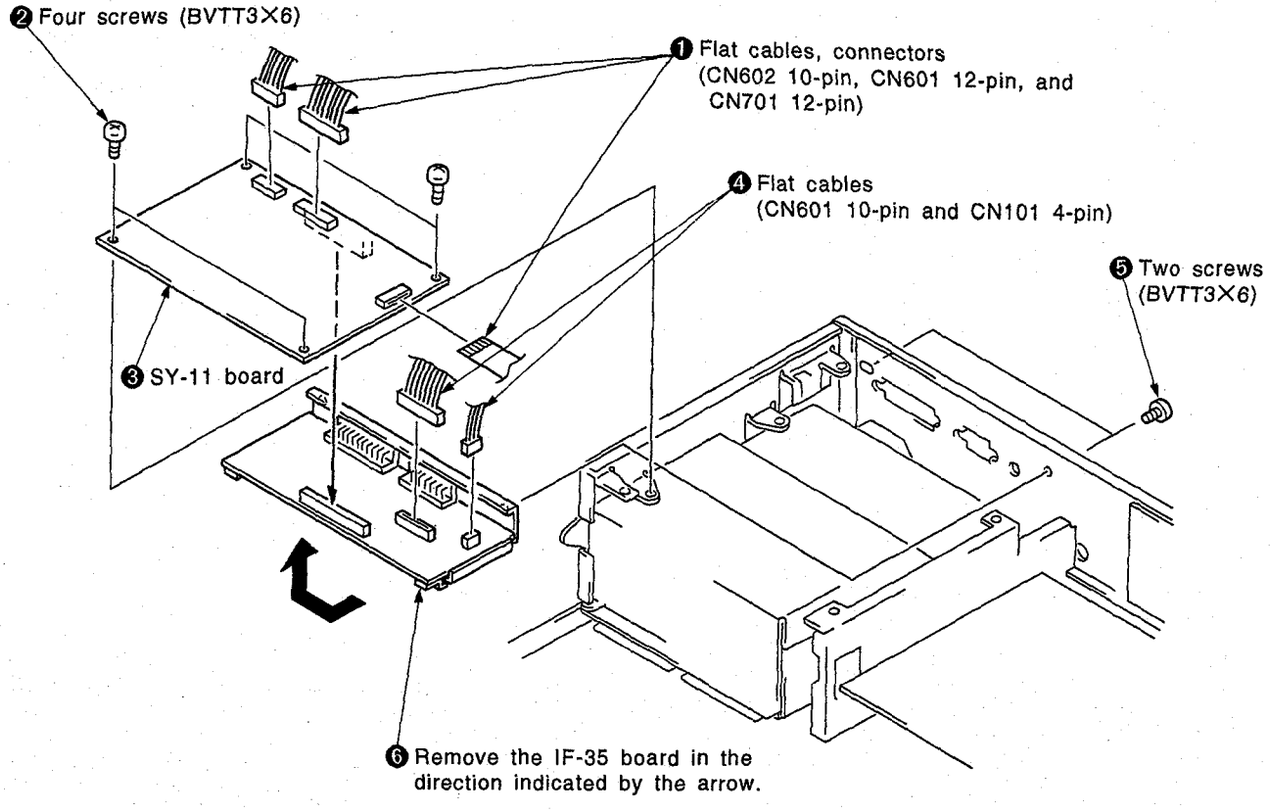
2-4. REMOVING THE MECHANICAL BLOCK



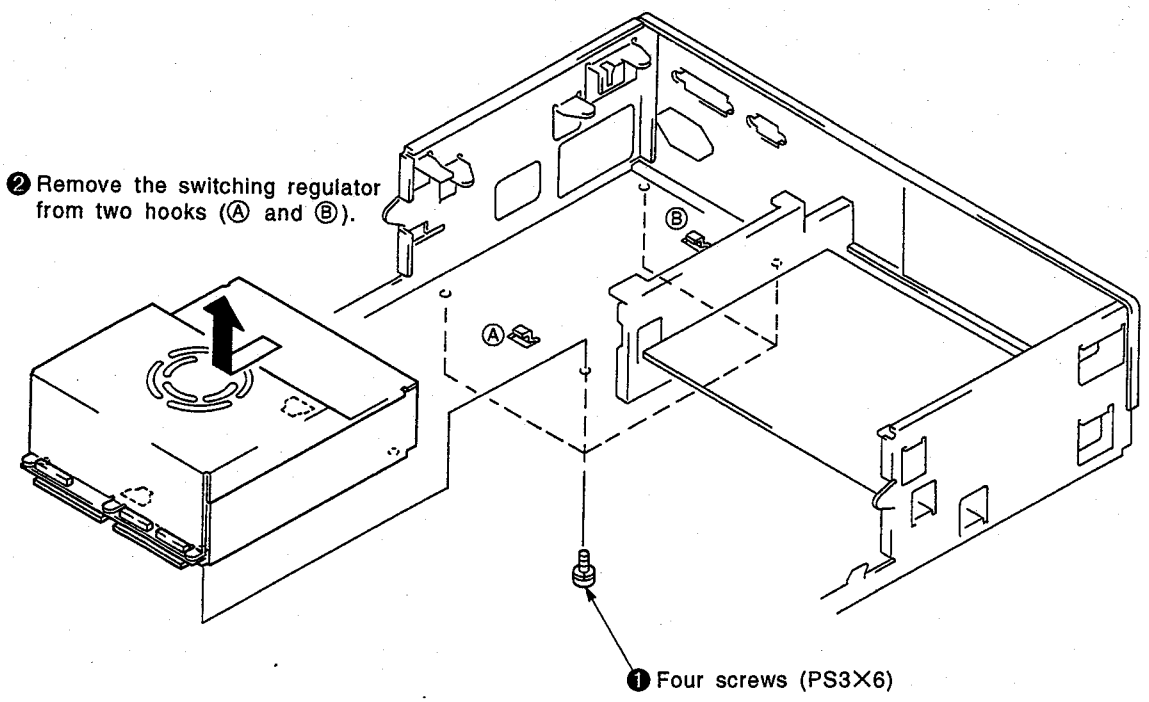
2-5. REMOVING THE FMY BOARD ASSY



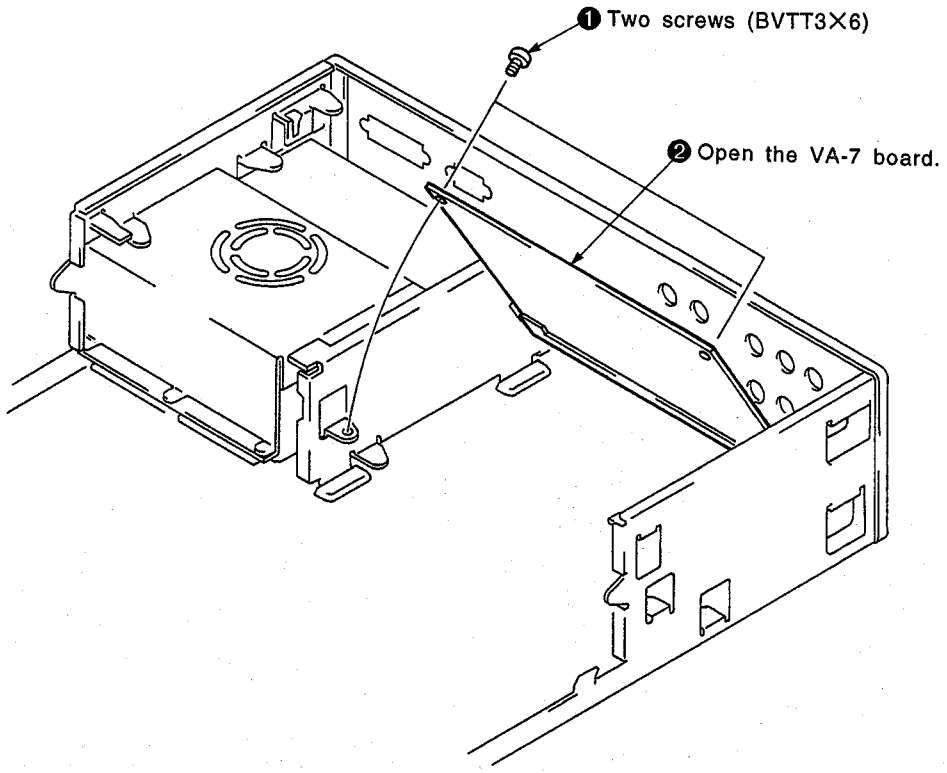
2-6. REMOVING THE SY-11 AND IF-35 BOARDS



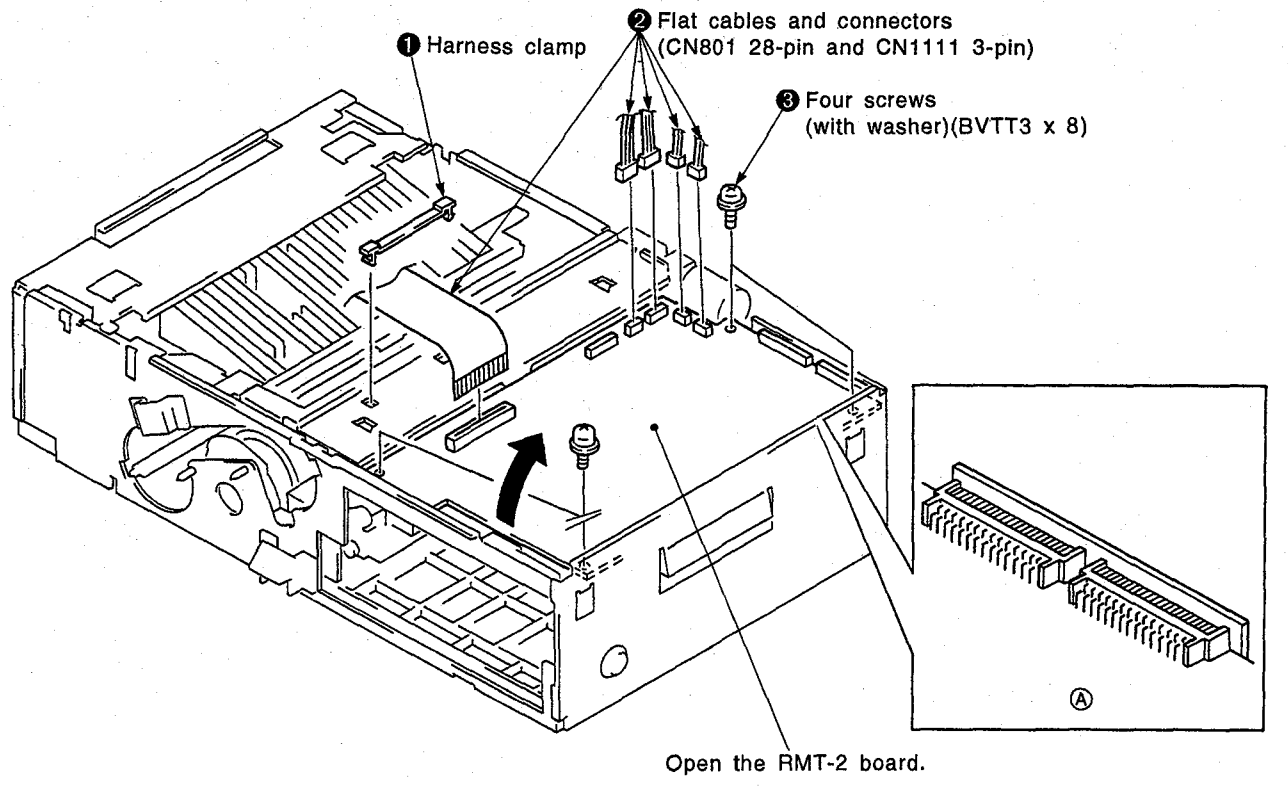
2-7. REMOVING THE SWITCHING REGULATOR



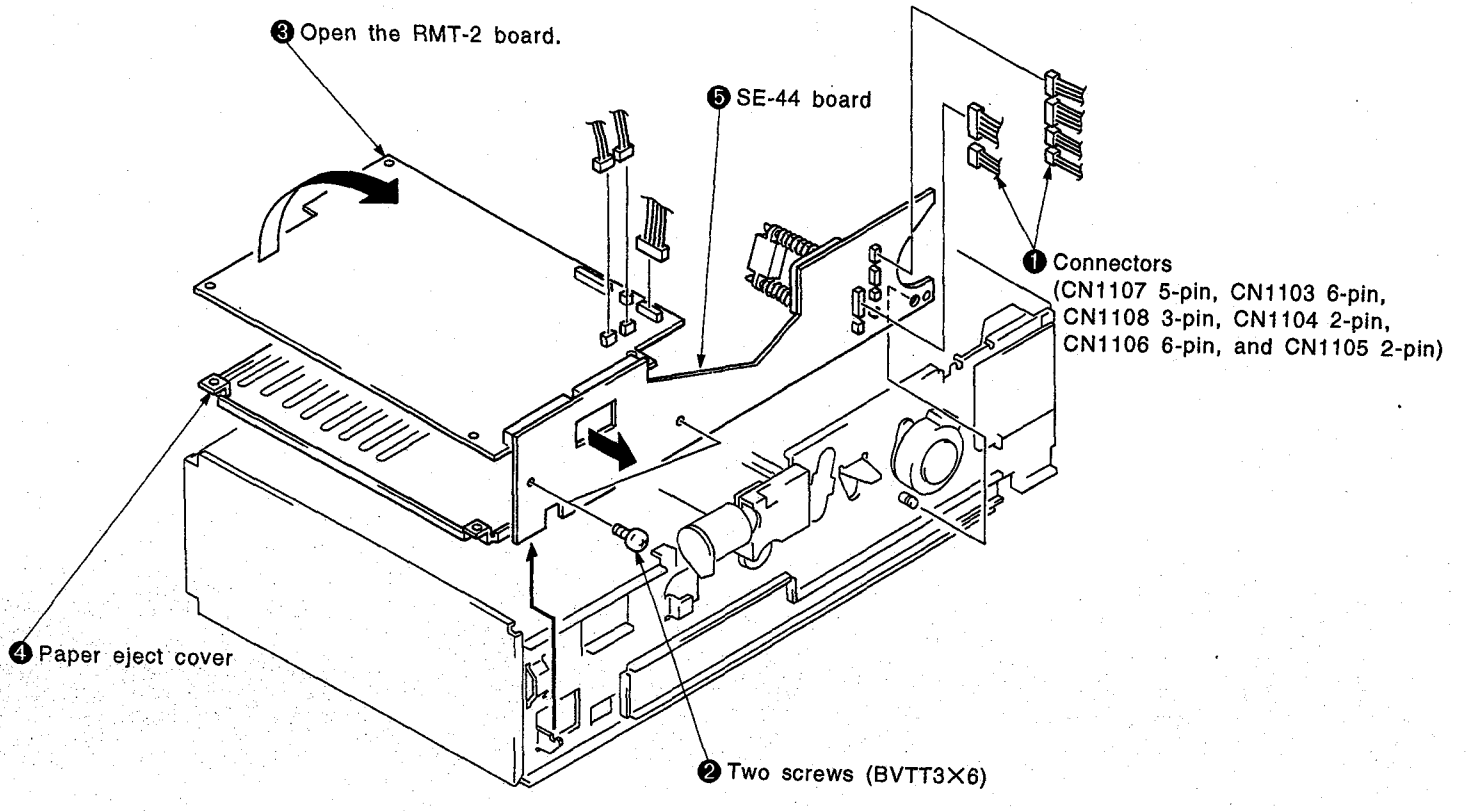
2-8. OPENING THE VA-7 BOARD



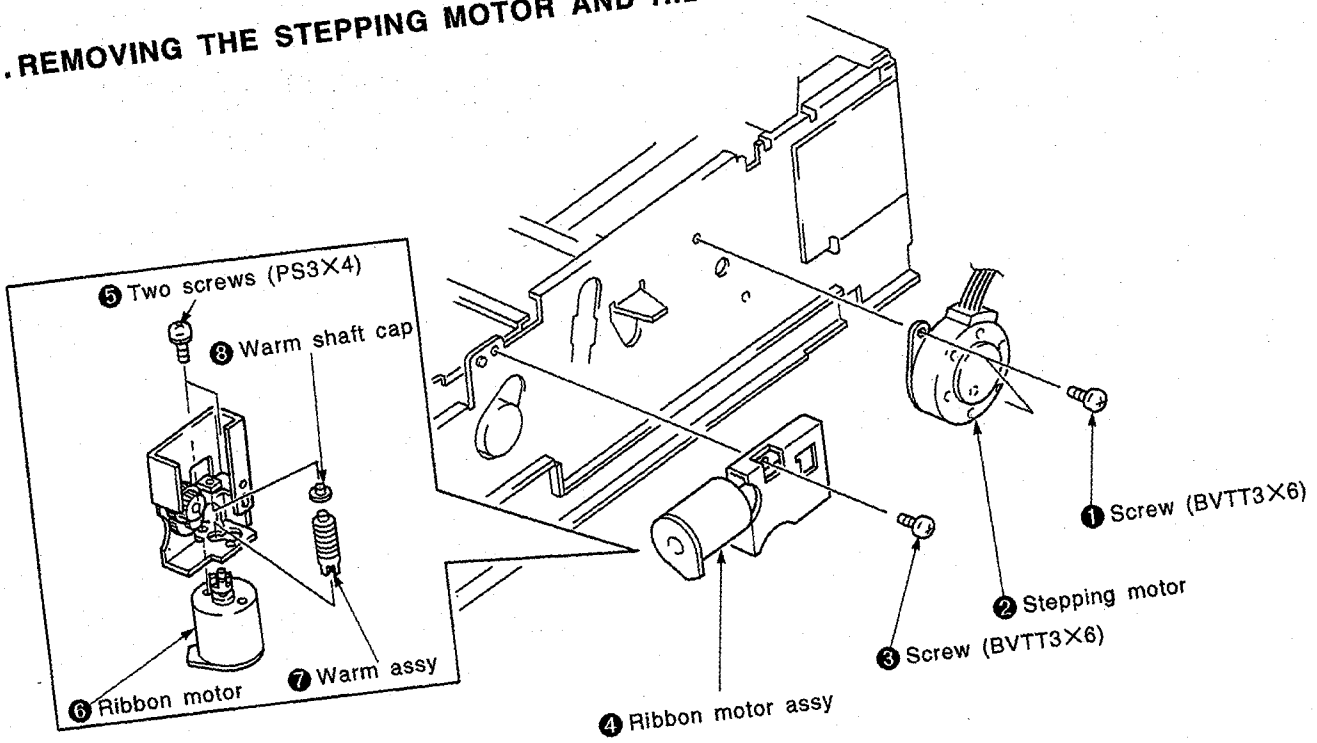
2-9. REMOVING THE PRT-2 BOARD



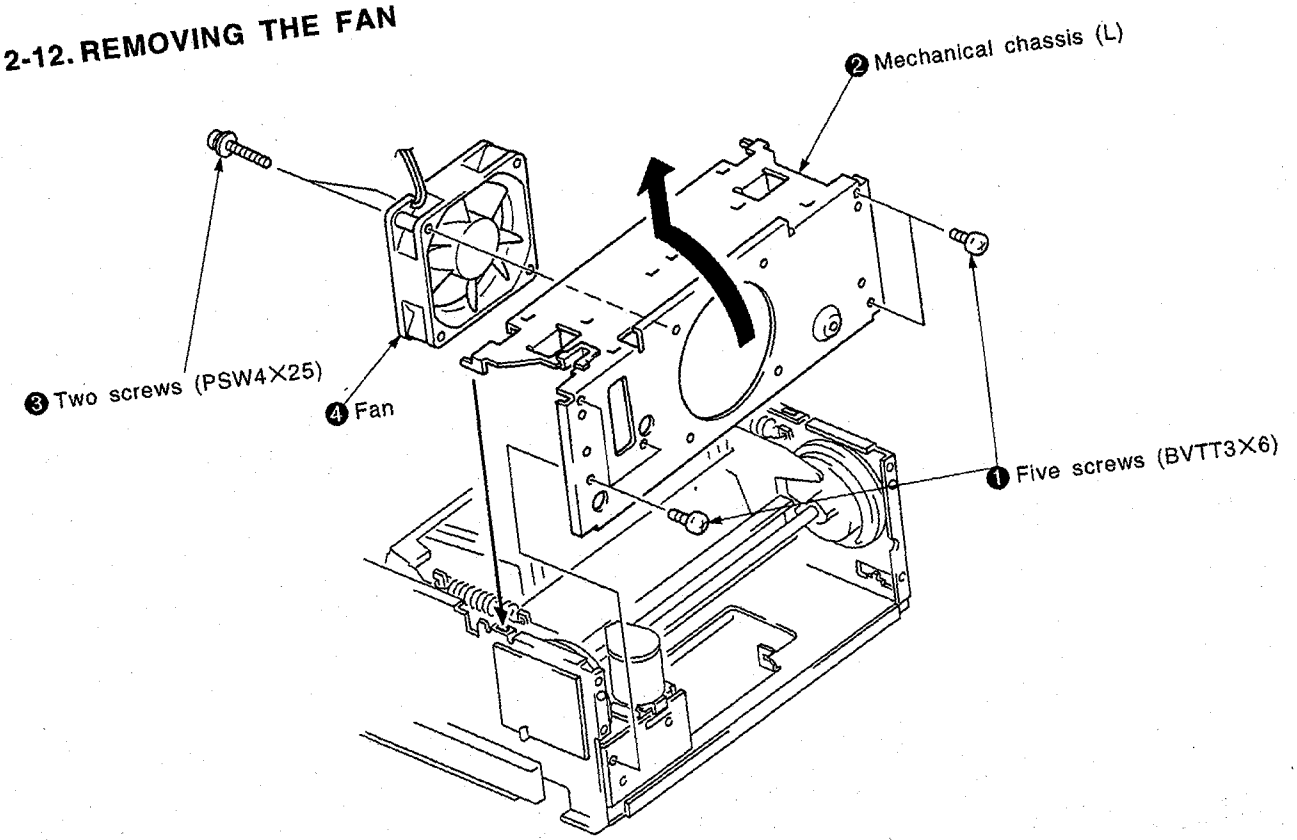
2-10. REMOVING THE PRT-2 AND SE-44 BOARDS



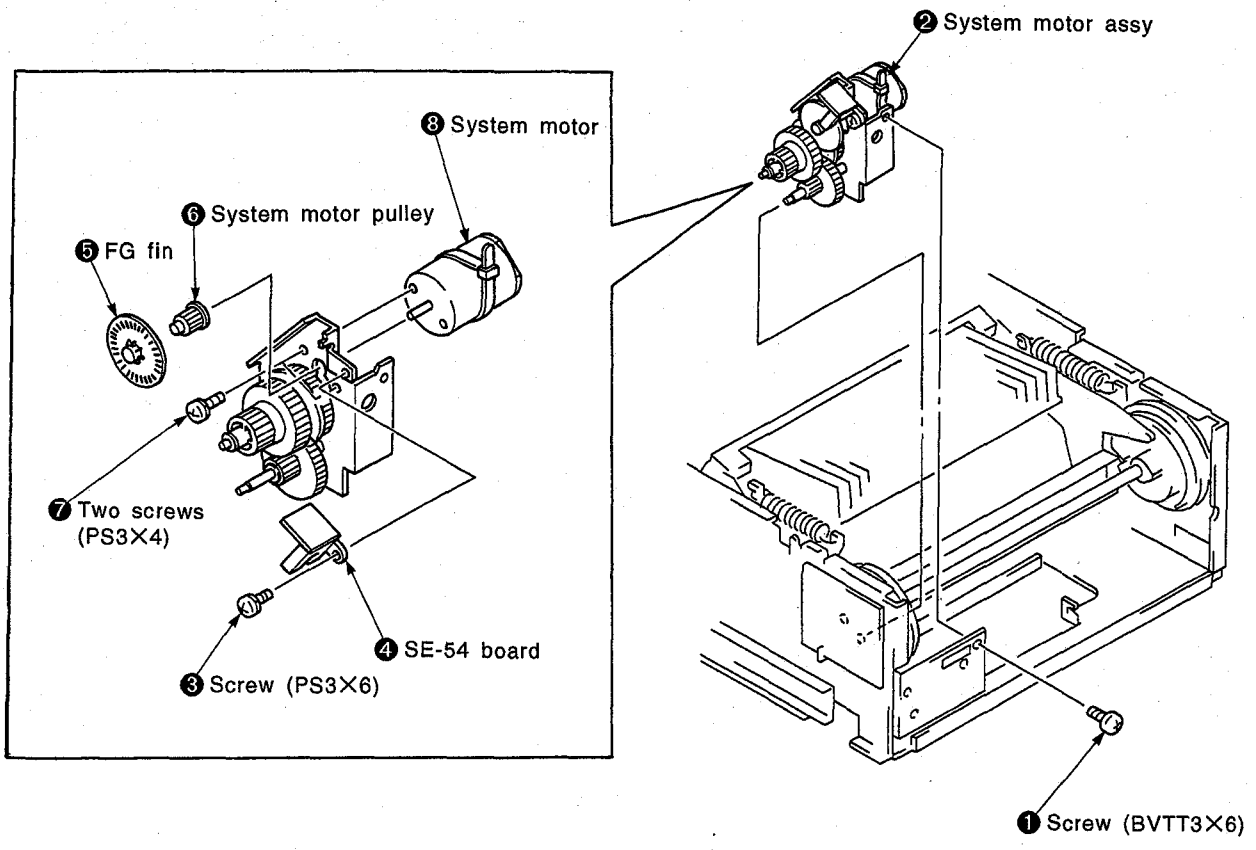
2-11. REMOVING THE STEPPING MOTOR AND RIBBON MOTOR



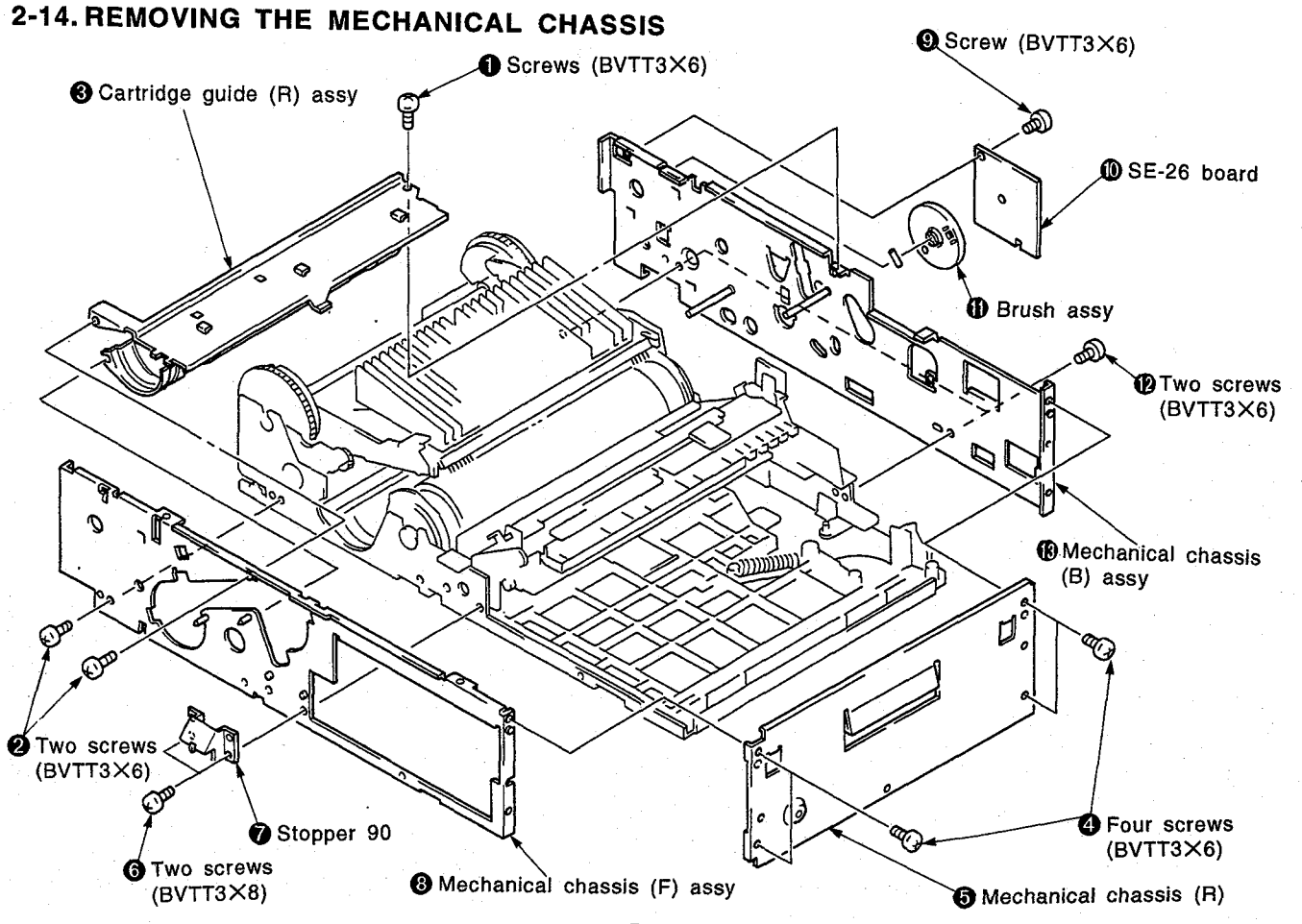
2-12. REMOVING THE FAN



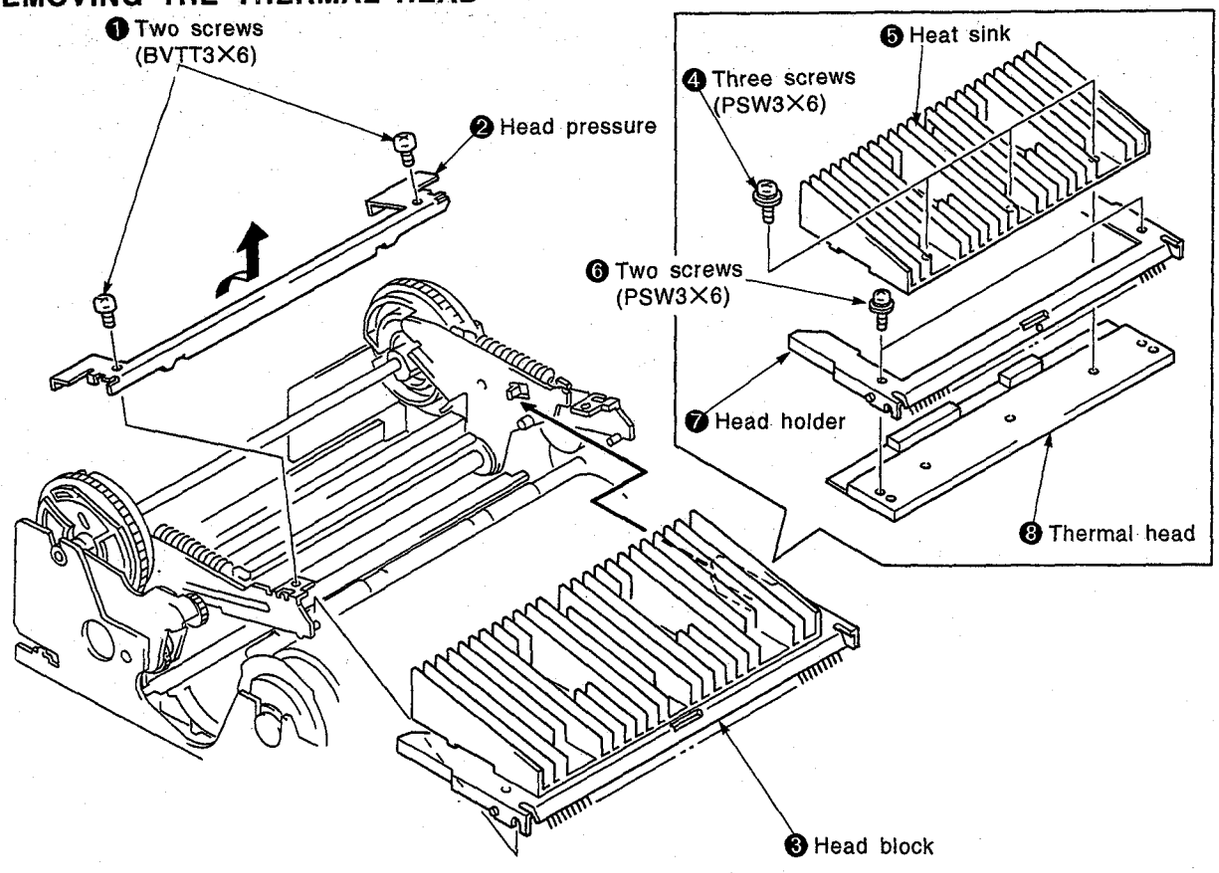
2-13. REMOVING THE SYSTEM MOTOR



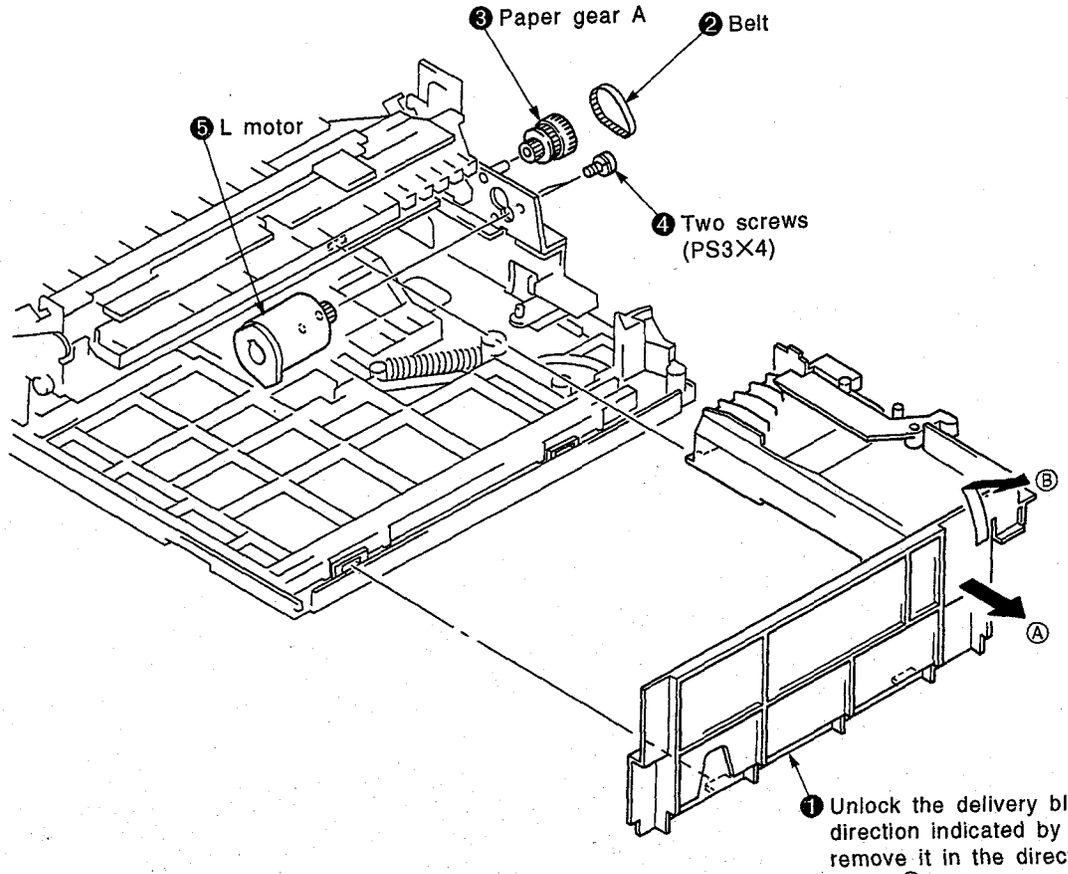
2-14. REMOVING THE MECHANICAL CHASSIS



2-15. REMOVING THE THERMAL HEAD

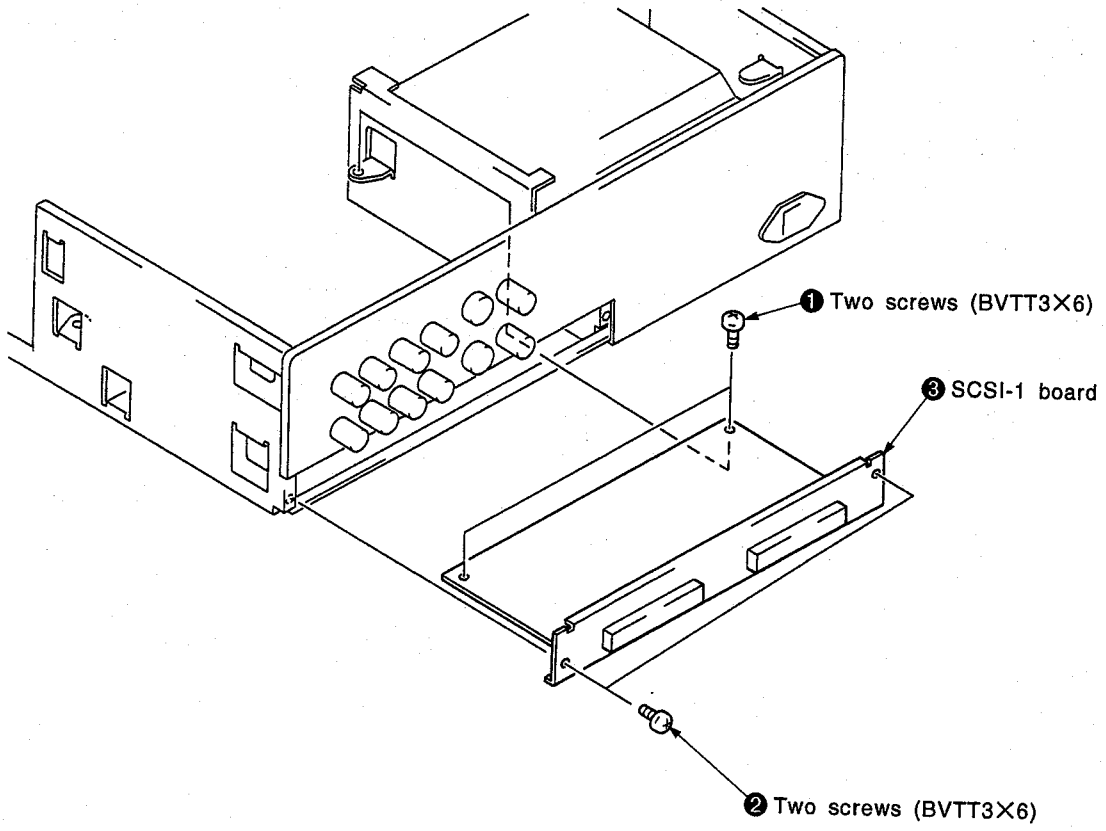


2-16. REMOVING THE L MOTOR



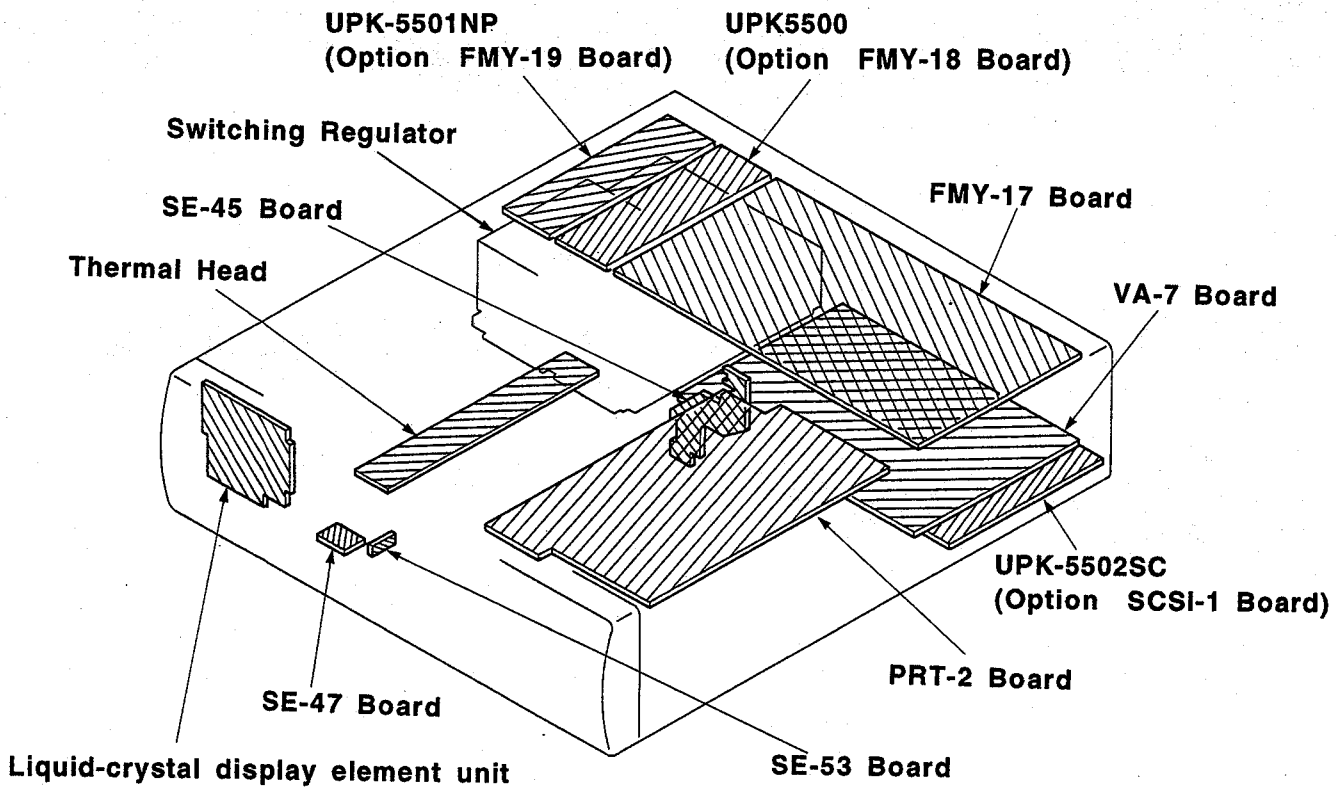
❶ Unlock the delivery block assy in the direction indicated by arrow Ⓐ and remove it in the direction indicated by arrow Ⓑ.

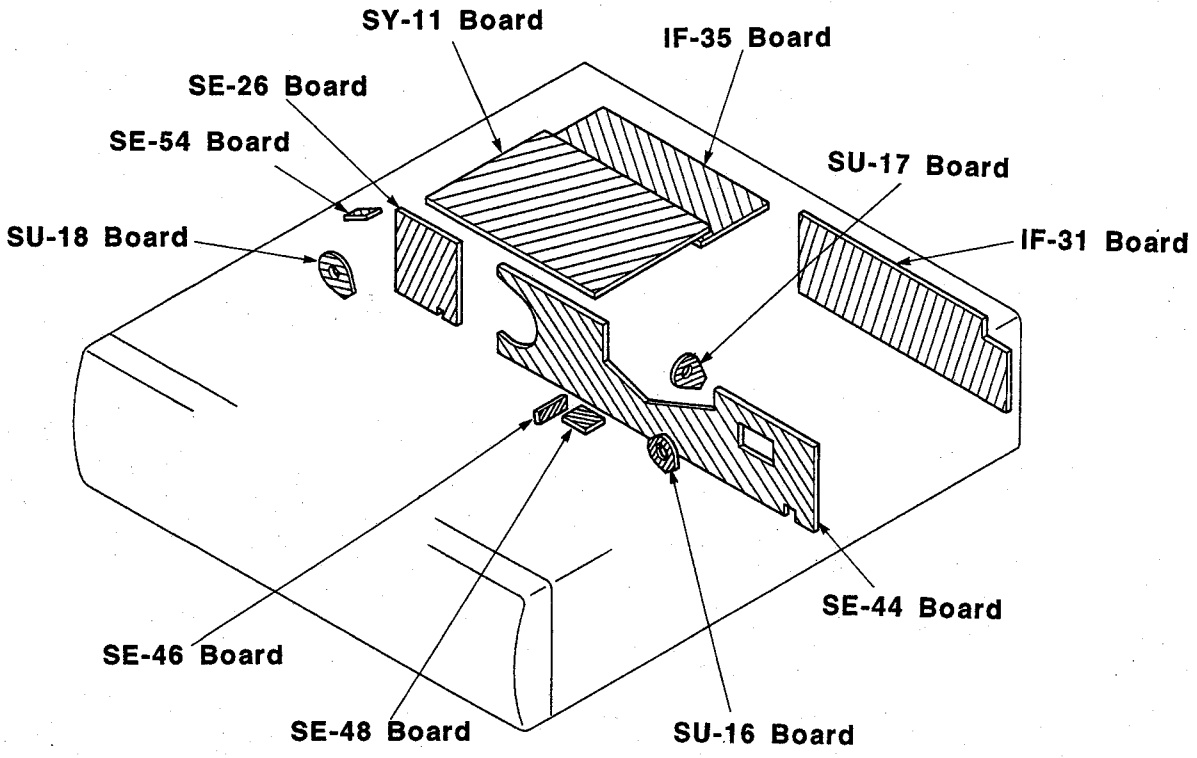
2-17. REMOVING THE SCSI-1 BOARD (OPTION UPK-5502SC)



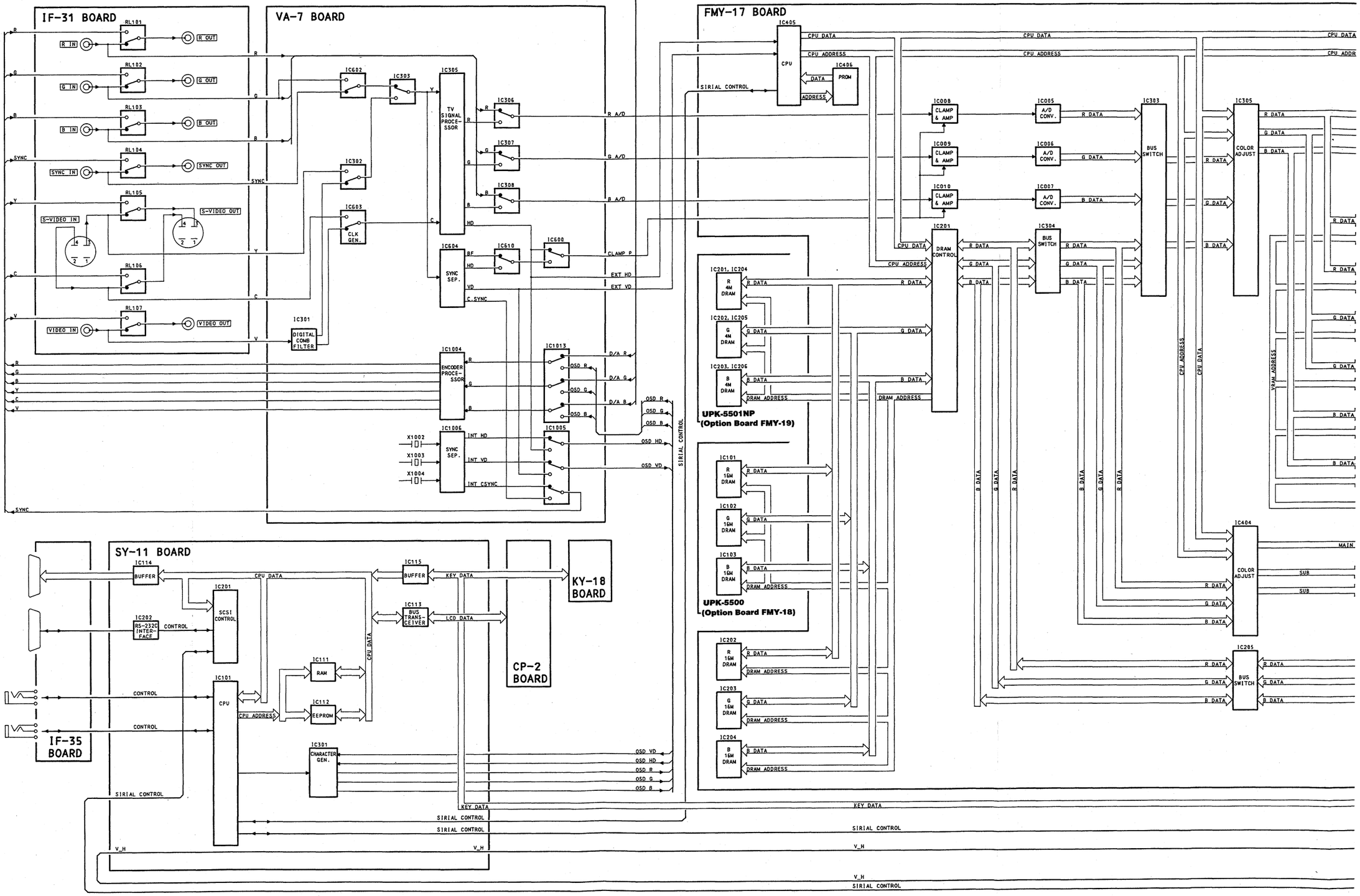
SECTION 3
DIAGRAMS

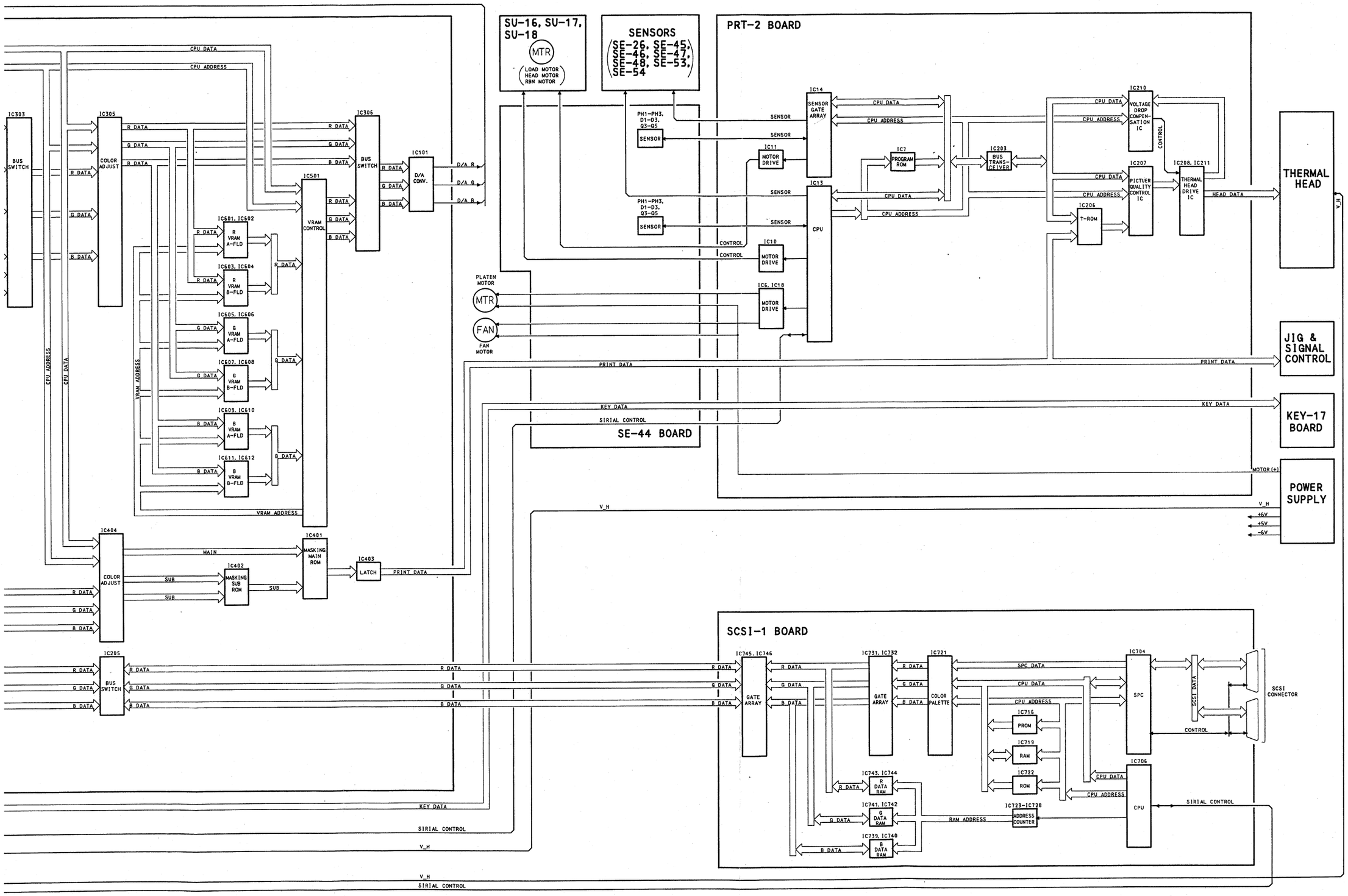
3-1. CIRCUIT BOARDS LOCATION



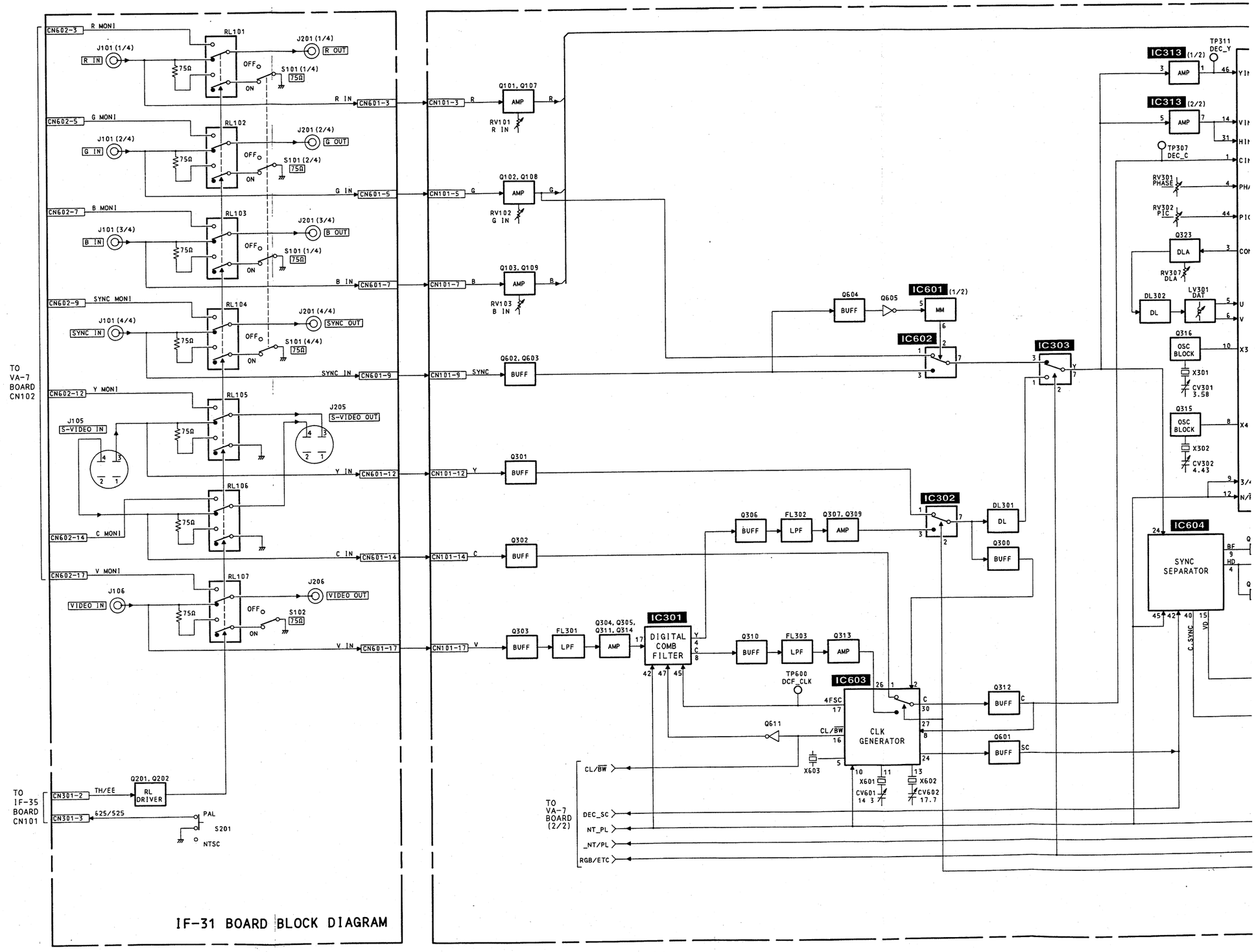


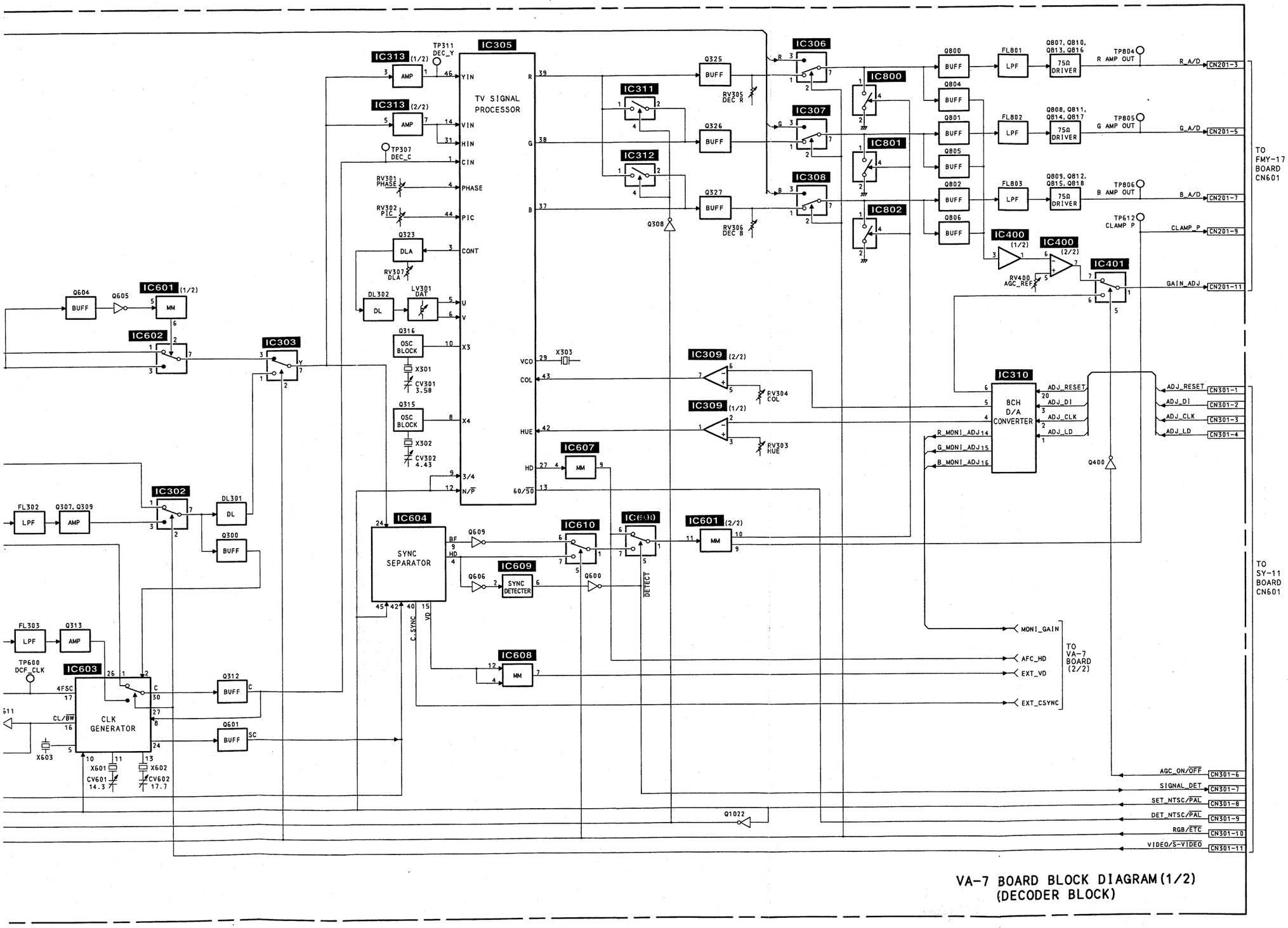
3-2. OVERALL BLOCK DIAGRAM




SU-16, SU-17, SU-18
MTR
LOAD MOTOR
HEAD MOTOR
RBN MOTOR
SENSORS
(SE-26, SE-45, SE-46, SE-47, SE-48, SE-53, SE-54)
PRT-2 BOARD
IC303
BUS SWITCH
IC305
COLOR ADJUST
IC306
BUS SWITCH
IC101
D/A CONV.
IC501
VRAM CONTROL
IC601, IC602
R VRAM A-FLD
IC603, IC604
R VRAM B-FLD
IC605, IC606
G VRAM A-FLD
IC607, IC608
G VRAM B-FLD
IC609, IC610
B VRAM A-FLD
IC611, IC612
B VRAM B-FLD
CPU DATA
CPU ADDRESS
R DATA
G DATA
B DATA
VRAM ADDRESS
D/A R
D/A G
D/A B
IC404
COLOR ADJUST
IC401
MASKING MAIN ROM
IC402
MASKING SUB ROM
IC403
LATCH
MAIN
SUB
PRINT DATA
IC205
BUS SWITCH
IC14
SENSOR GATE ARRAY
IC11
MOTOR DRIVE
IC13
CPU
IC10
MOTOR DRIVE
IC6, IC18
MOTOR DRIVE
IC7
PROGRAM ROM
IC203
BUS TRANS-CEIVER
IC210
VOLTAGE DROP COMPEN-SATION IC
IC207
PICTUER QUALITY CONTROL IC
IC208, IC211
THERMAL HEAD DRIVE IC
IC206
T-ROM
PH1-PH3, D1-D3, Q3-Q5
SENSOR
CONTROL
HEAD DATA
THERMAL HEAD
V_H
PLATEN MOTOR
FAN MOTOR
FAN
PRINT DATA
KEY DATA
SIRIAL CONTROL
SE-44 BOARD
JIG & SIGNAL CONTROL
KEY-17 BOARD
MOTOR (+)
POWER SUPPLY
+5V
+5V
-5V
SCSI-1 BOARD
IC745, IC746
GATE ARRAY
IC731, IC732
GATE ARRAY
IC721
COLOR PALETTE
IC704
SPC
SCSI CONNECTOR
SCSI DATA
SPC DATA
IC716
PROM
IC719
RAM
IC722
ROM
IC706
CPU
IC743, IC744
R DATA RAM
IC741, IC742
G DATA RAM
IC739, IC740
B DATA RAM
IC723-IC728
ADDRESS COUNTER
RAM ADDRESS

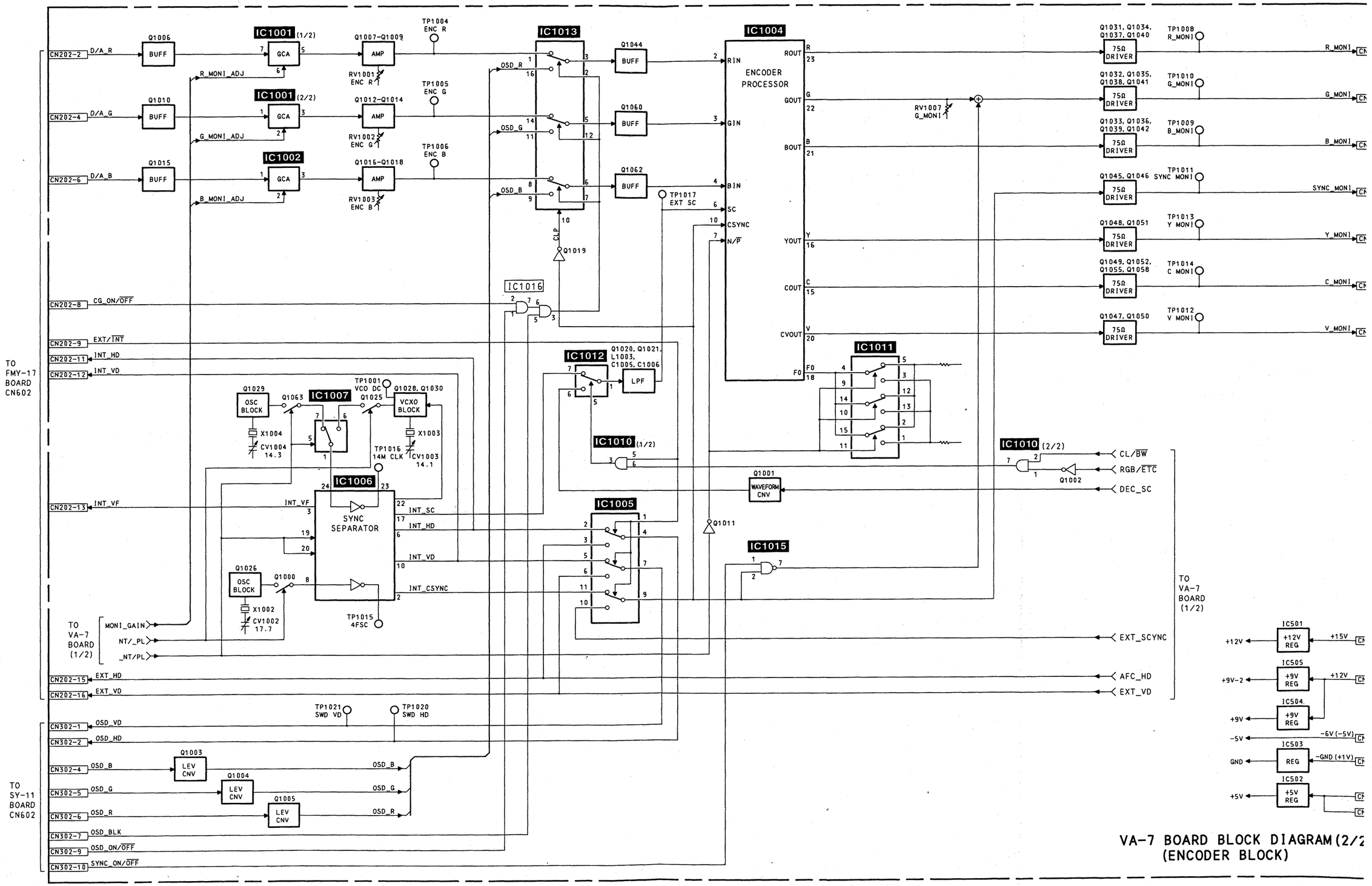
3-3. ANALOG VIDEO BLOCK DIAGRAM (1)



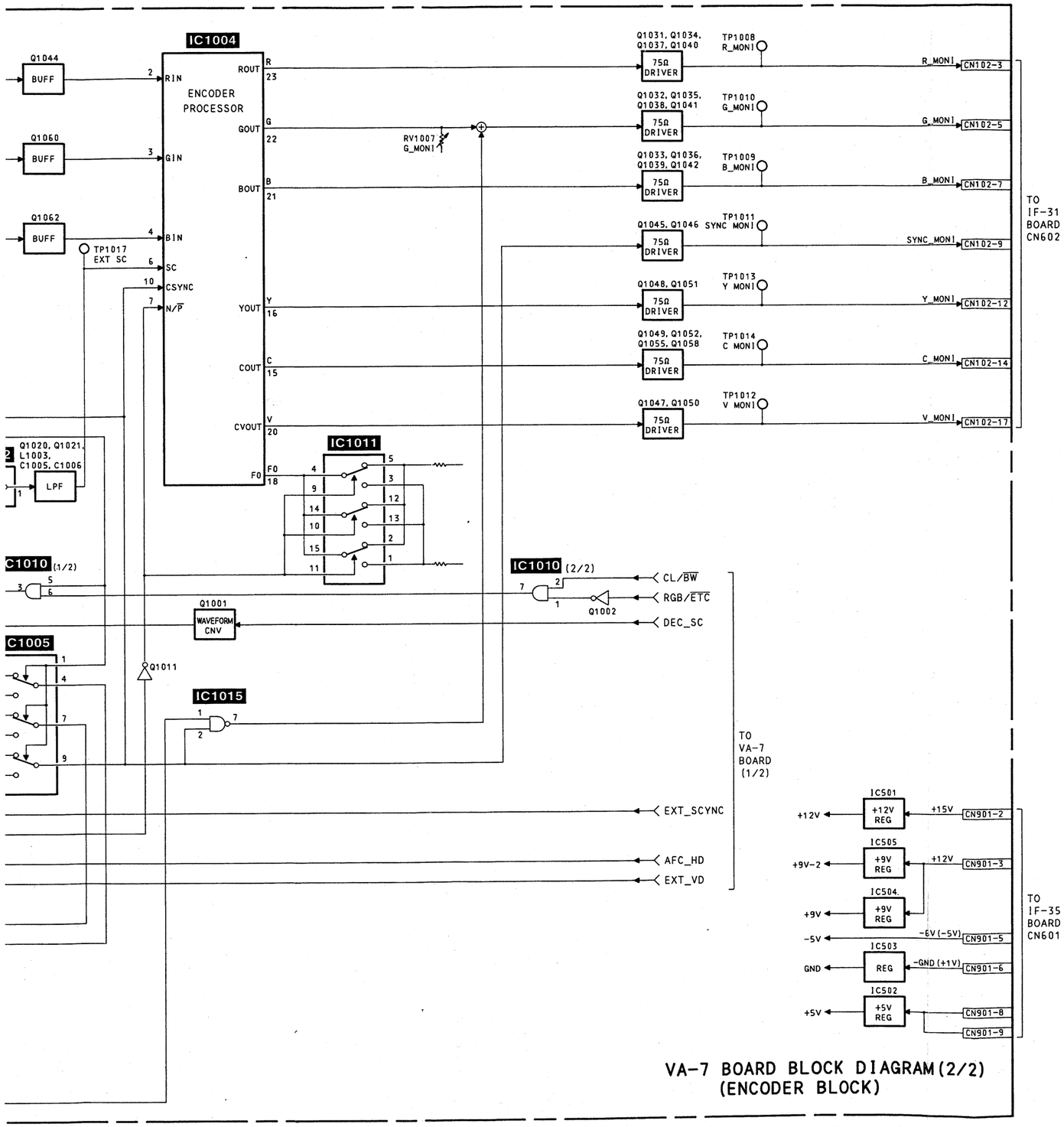


VA-7 BOARD BLOCK DIAGRAM (1/2)
(DECODER BLOCK)

3-4. ANALOG VIDEO BLOCK DIAGRAM (2)

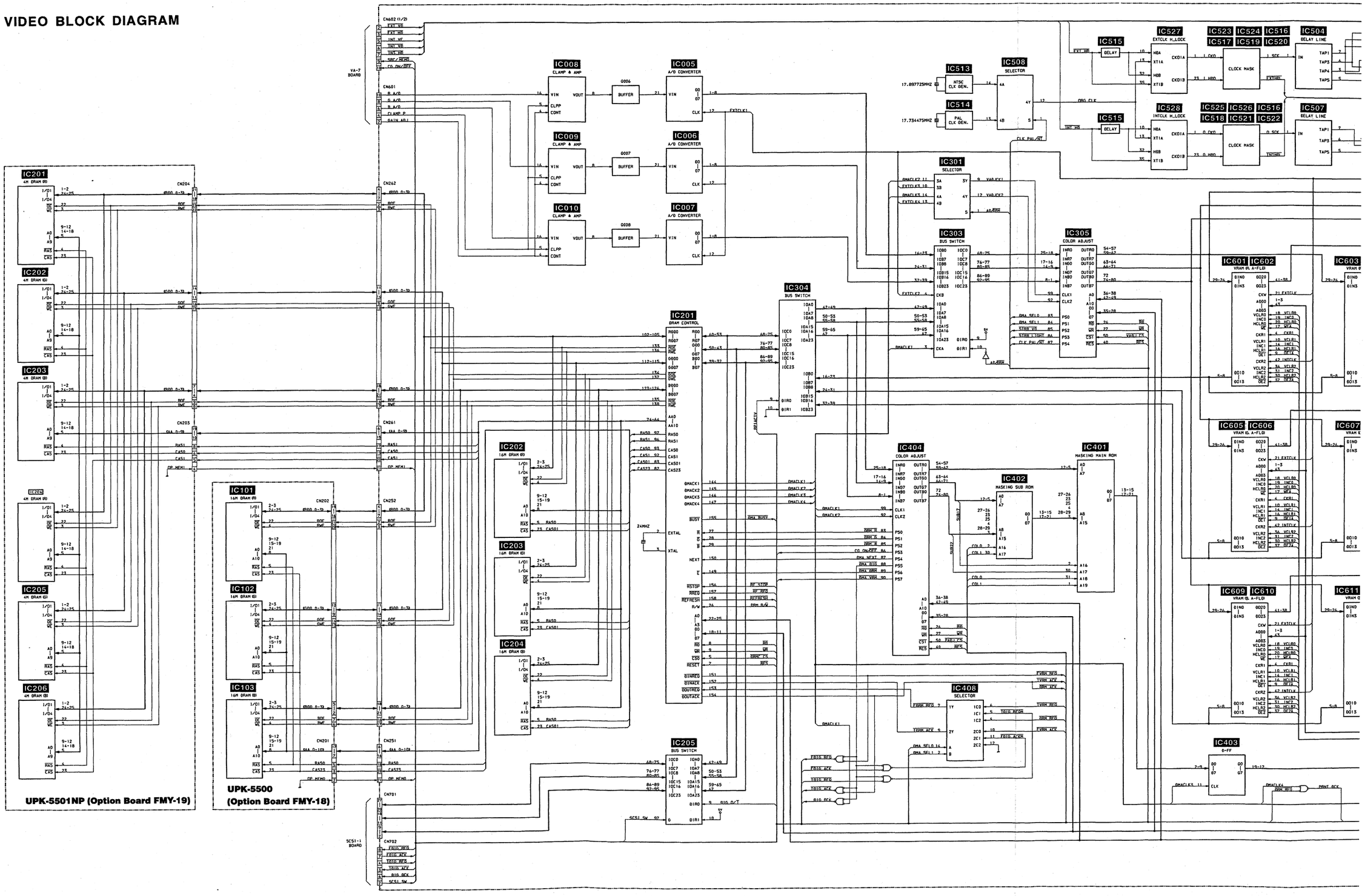


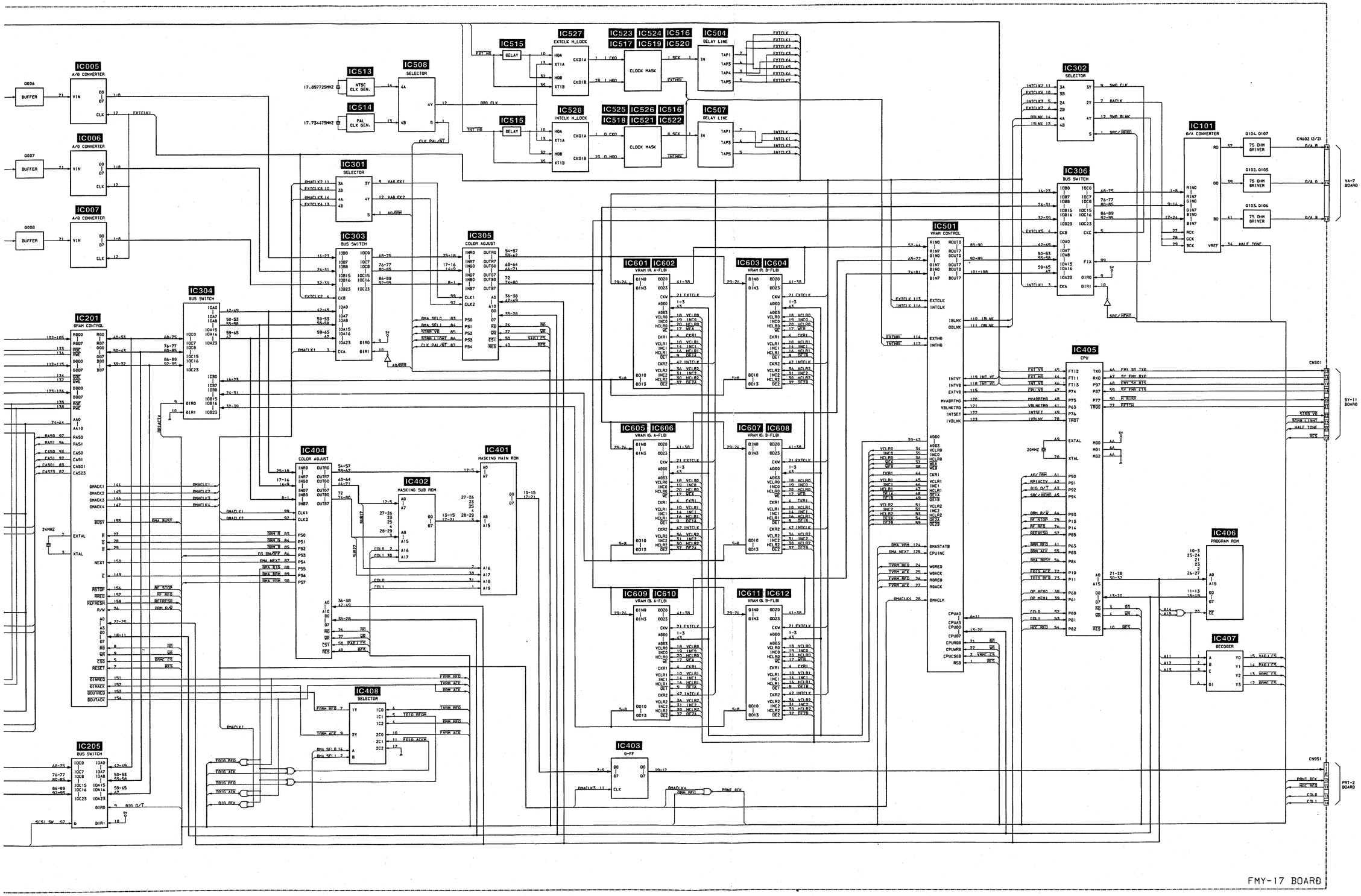
VA-7 BOARD BLOCK DIAGRAM (2/2)
(ENCODER BLOCK)



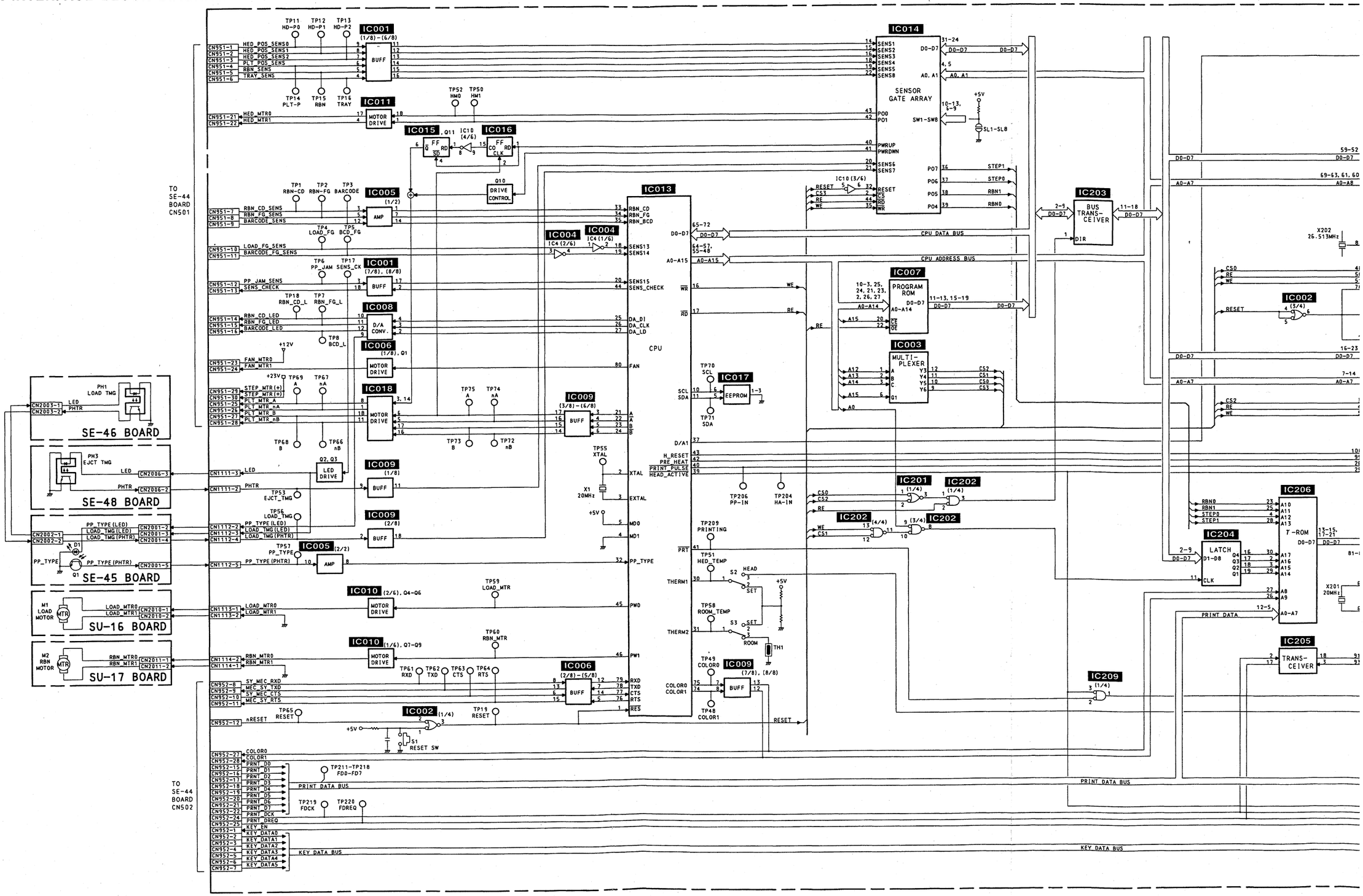
VA-7 BOARD BLOCK DIAGRAM (2/2)
(ENCODER BLOCK)

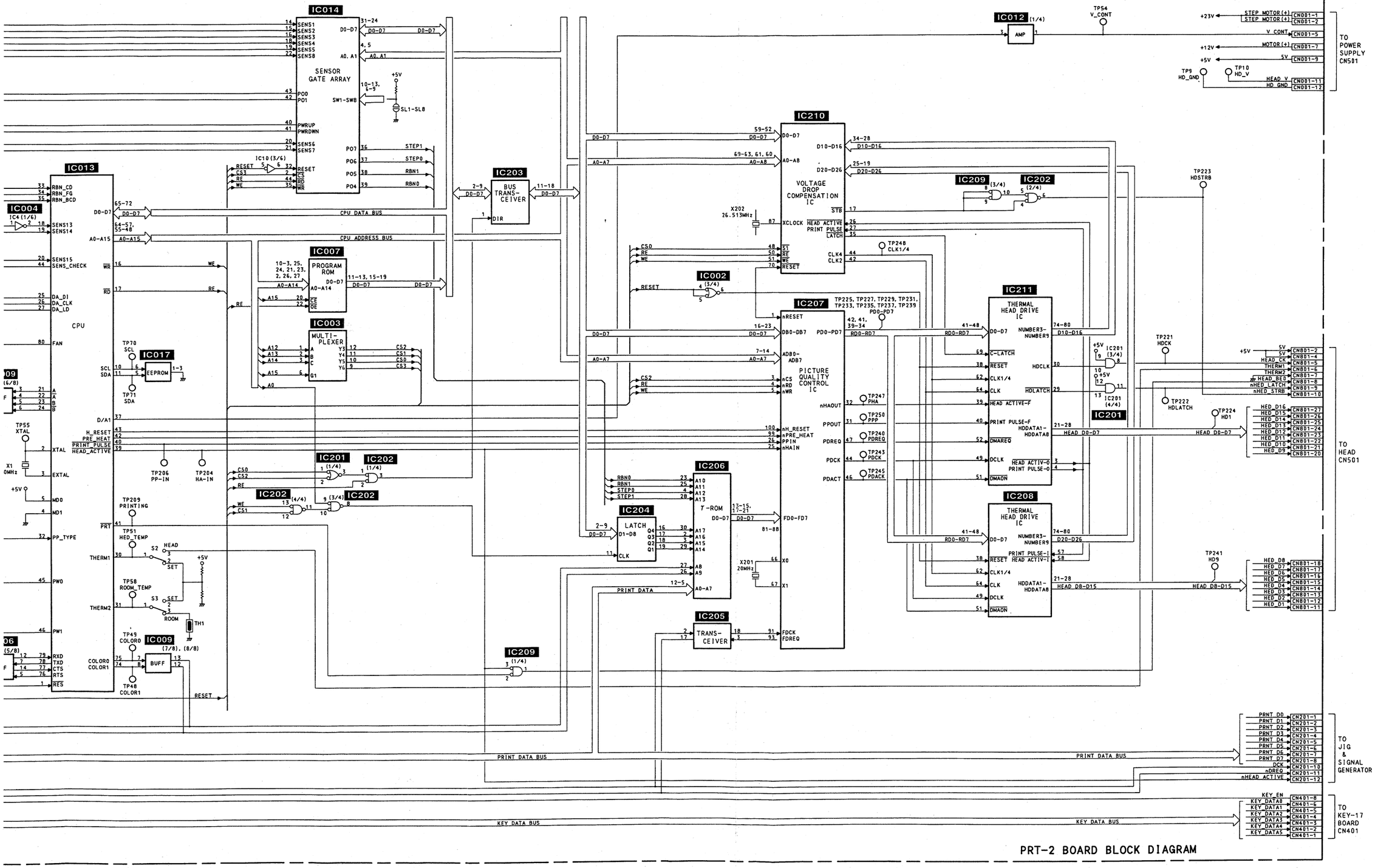
3-5. DIGITAL VIDEO BLOCK DIAGRAM



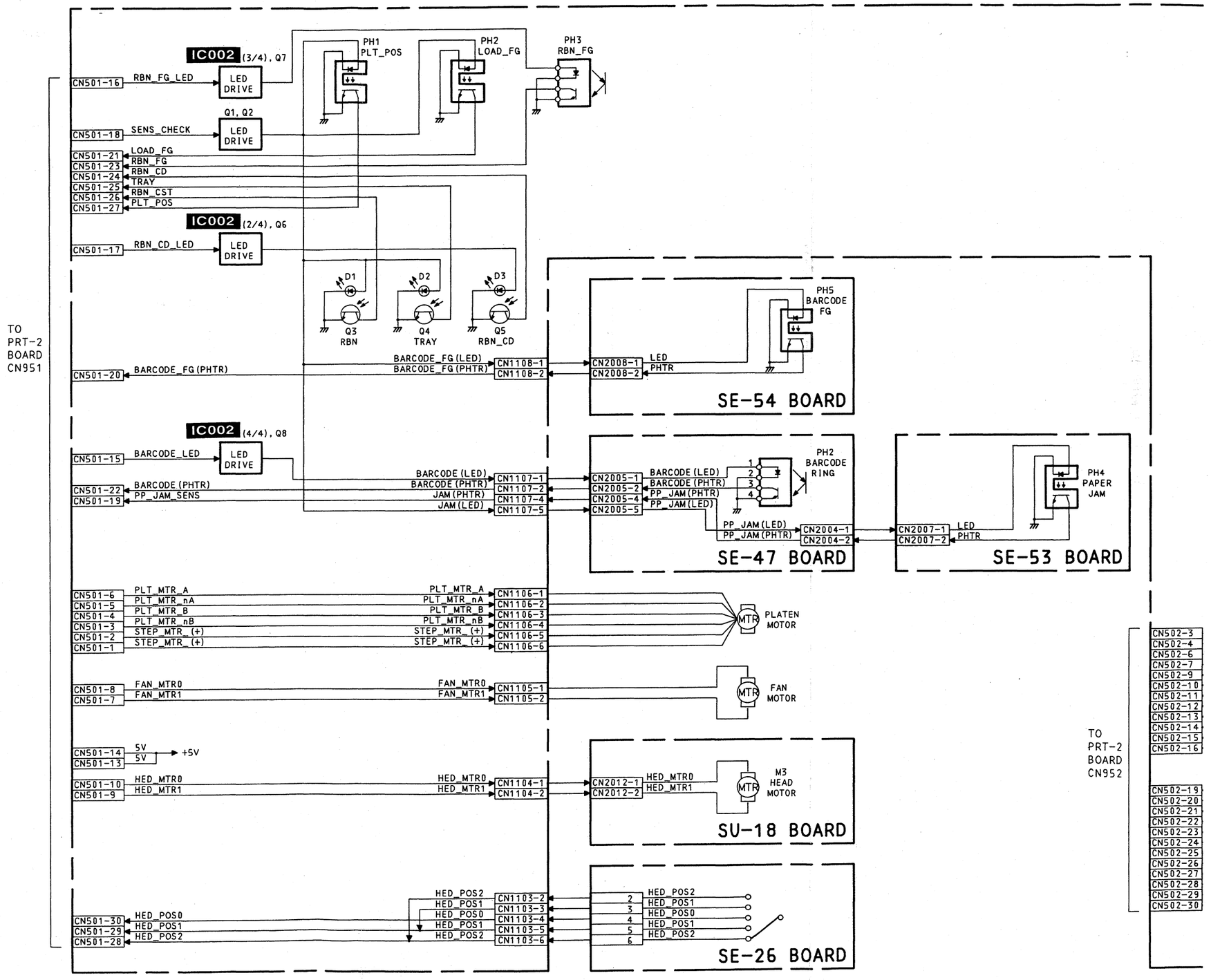

IC005
A/D CONVERTER
IC006
A/D CONVERTER
IC007
A/D CONVERTER
BUFFER
VIN
CLK
EXTCLK1
IC513
NTSC CLK GEN.
17.897725MHZ
IC514
PAL CLK GEN.
17.734475MHZ
IC508
SELECTOR
CLK PAL/NT
IC515
DELAY
IC527
EXTCLK H_LOCK
HDA
XTIA
HDB
XTIB
CKO1A
CKO1B
IC523 IC524 IC516
IC517 IC519 IC520
CLOCK MASK
EXTHD
IC504
DELAY LINE
TAP1
TAP3
TAP4
TAP5
EXTCLK
EXTCLK1
EXTCLK2
EXTCLK3
EXTCLK4
EXTCLK5
EXTCLK6
EXTCLK7
IC528
INTCLK H_LOCK
IC525 IC526 IC516
IC518 IC521 IC522
INTHD
IC507
INTCLK
INTCLK1
INTCLK2
INTCLK3
IC301
SELECTOR
VA0.CK1
VA0.CK2
A0.SSH
IC303
BUS SWITCH
IC305
COLOR ADJUST
PS0
PS1
PS2
PS3
PS4
PS5
PS6
PS7
IC304
BUS SWITCH
IC201
DRAM CONTROL
IC601 IC602
VRAM 0L A-FL0
IC603 IC604
VRAM 0L B-FL0
IC605 IC606
VRAM 4L A-FL0
IC607 IC608
VRAM 4L B-FL0
IC609 IC610
VRAM 8L A-FL0
IC611 IC612
VRAM 8L B-FL0
IC501
VRAM CONTROL
IC302
SELECTOR
IC306
BUS SWITCH
IC101
D/A CONVERTER
0104, 0107
0102, 0105
0103, 0106
75 OHM DRIVER
CN402 (2/2)
VA-7 BOARD
IC405
CPU
IC406
PROGRAM ROM
IC407
DECODER
IC404
COLOR ADJUST
IC402
MASKING SUB ROM
IC401
MASKING MAIN ROM
IC408
SELECTOR
IC403
D-FF
IC205
BUS SWITCH
CN301
SY-11 BOARD
CN951
PRT-2 BOARD
FMY-17 BOARD

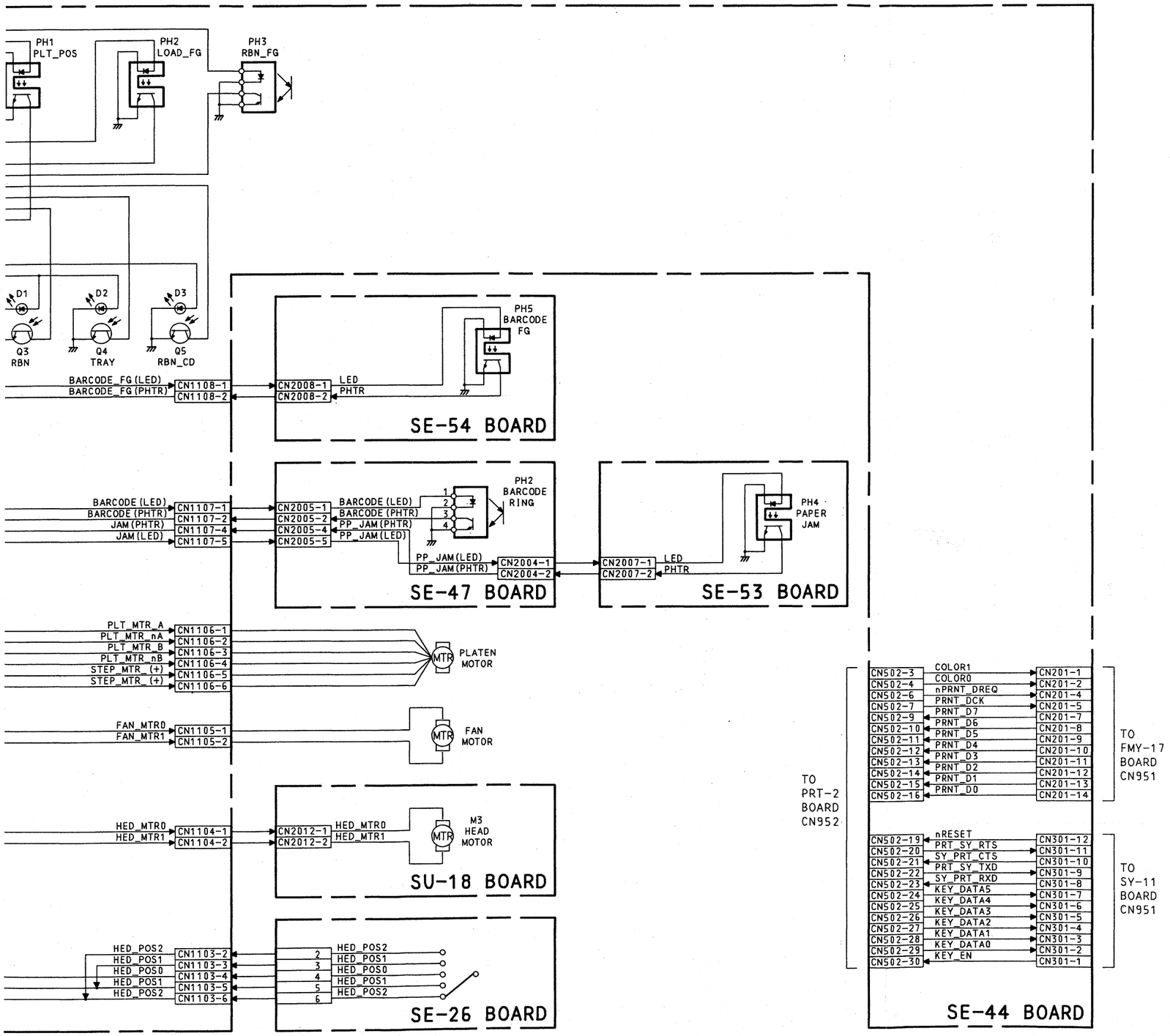
3-6. MECHA INTERFACE BLOCK DIAGRAM




IC014
SENSOR GATE ARRAY
SENS1
SENS2
SENS3
SENS4
SENS5
SENS8
D0-D7
A0, A1
POD
PO1
SW1-SW8
SL1-SL8
PWRUP
PWRDWN
SENS6
SENS7
PO7
PO6
PO5
PO4
STEP1
STEP0
RBN1
RBN0
IC10 (3/6)
RESET
CS3
RE
WE
IC013
CPU
RBN_CD
RBN_FG
RBN_BCD
SENS13
SENS14
SENS15
SENS_CHECK
DA_DI
DA_CLK
DA_LD
FAN
SCL
SDA
XTAL
EXTAL
MD0
MD1
PP_TYPE
PW0
PW1
RXD
TXD
CTS
RTS
RES
D/A1
H_RESET
PRE_HEAT
PRINT_PULSE
HEAD_ACTIVE
PRT
CPU DATA BUS
CPU ADDRESS BUS
IC004
IC4 (1/6)
IC017
EEPROM
TP70 SCL
TP71 SDA
TP55 XTAL
X1 0MHz
TP206 PP-IN
TP204 HA-IN
TP209 PRINTING
TP51 HED_TEMP
TP58 ROOM_TEMP
TP49 COLOR0
TP48 COLOR1
IC009 (7/8), (8/8)
BUFF
COLOR0
COLOR1
THERM1
THERM2
S2 HEAD
S3 SET ROOM
TH1
IC007
PROGRAM ROM
IC003
MULTI-PLEXER
IC201 (1/4)
IC202 (1/4)
IC202 (4/4)
IC209 (1/4)
IC203
BUS TRANS-CEIVER
DIR
IC210
VOLTAGE DROP COMPENSATION IC
X202 26.513MHz
STB
XCLOCK
HEAD ACTIVE
PRINT PULSE
LATCH
IC002 (3/4)
IC209 (3/4)
IC202 (2/4)
TP248 CLK1/4
IC207
PICTURE QUALITY CONTROL IC
nRESET
DB0-DB7
ADB0-ADB7
nCS
nRD
nWR
nHAOUT
PPOUT
PDREQ
PDCK
PDACT
nH_RESET
nPRE_HEAT
PPIN
nHAIN
TP247 PHA
TP250 PPP
TP240 PDREQ
TP243 PDCK
TP245 PDACK
TP225, TP227, TP229, TP231, TP233, TP235, TP237, TP239
PD0-PD7
RD0-RD7
IC206
T-ROM
IC204
LATCH
IC205
TRANS-CEIVER
X201 20MHz
FDO-FD7
FDCK
FDREQ
PRINT DATA
IC012 (1/4)
AMP
TP54 V_CONT
IC211
THERMAL HEAD DRIVE IC
NUMBER3-NUMBER9
C-LATCH
HDCLK
HDLATCH
HEAD ACTIVE-F
PRINT PULSE-F
HDDATA1-HDDATA8
DMAREQ
DCLK
DMAON
HEAD ACTIV-0
PRINT PULSE-0
IC208
THERMAL HEAD DRIVE IC
PRINT PULSE-1
HEAD ACTIV-1
IC201 (3/4)
IC201 (4/4)
TP223 HDSTRB
TP221 HDCK
TP222 HDLATCH
TP224 HD1
TP241 HD9
HEAD D0-D7
HEAD D8-D15
+23V
+12V
+5V
TP9 HD_GND
TP10 HD_V
STEP MOTOR(+)
V_CONT
MOTOR(+)
5V
HEAD V
HD_GND
CN001-1
CN001-2
CN001-5
CN001-7
CN001-9
CN001-11
CN001-12
TO POWER SUPPLY CN501
HEAD_CK
THERM1
THERM2
HEAD_BE
nHED_LATCH
nHED_STRB
HED_D16
HED_D15
HED_D14
HED_D13
HED_D12
HED_D11
HED_D10
HED_D9
HED_D8
HED_D7
HED_D6
HED_D5
HED_D4
HED_D3
HED_D2
HED_D1
CN801-2
CN801-4
CN801-5
CN801-6
CN801-7
CN801-8
CN801-9
CN801-10
CN801-27
CN801-26
CN801-25
CN801-24
CN801-23
CN801-22
CN801-21
CN801-20
CN801-18
CN801-17
CN801-16
CN801-15
CN801-14
CN801-13
CN801-12
CN801-11
TO HEAD CN501
PRNT D0
PRNT D1
PRNT D2
PRNT D3
PRNT D4
PRNT D5
PRNT D6
PRNT D7
DCK
nDREQ
nHEAD ACTIVE
CN201-1
CN201-2
CN201-3
CN201-4
CN201-5
CN201-6
CN201-7
CN201-8
CN201-10
CN201-11
CN201-12
TO JIG & SIGNAL GENERATOR
KEY_EN
KEY_DATA0
KEY_DATA1
KEY_DATA2
KEY_DATA3
KEY_DATA4
KEY_DATA5
CN401-8
CN401-6
CN401-5
CN401-4
CN401-3
CN401-2
CN401-1
TO KEY-17 BOARD CN401
PRINT DATA BUS
KEY DATA BUS
PRT-2 BOARD BLOCK DIAGRAM

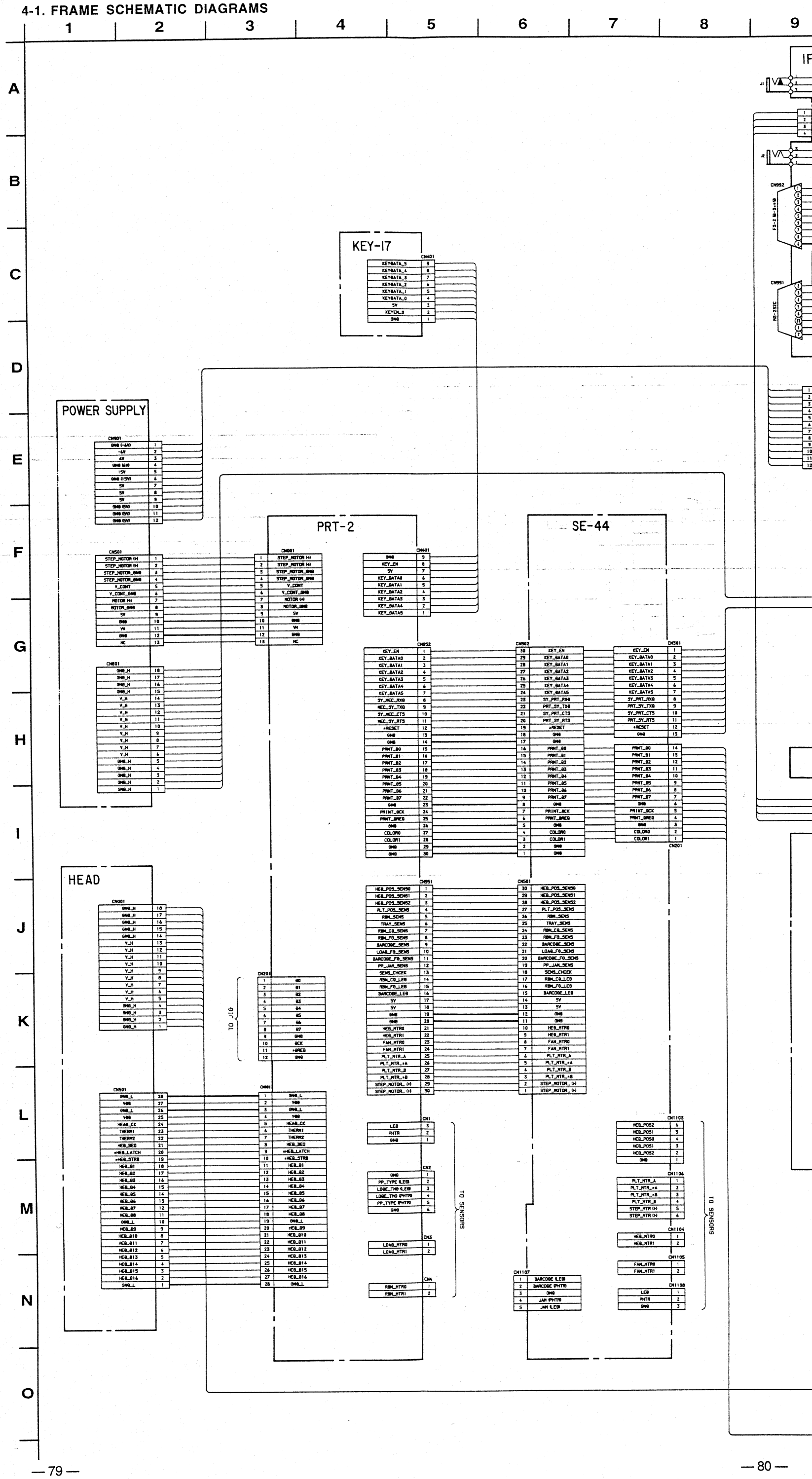
3-7. MECHA CONTROL BLOCK DIAGRAM




PH1
PLT_POS
PH2
LOAD_FG
PH3
RBN_FG
D1
D2
D3
Q3
RBN
Q4
TRAY
Q5
RBN_CD
PH5
BARCODE
FG
BARCODE_FG(LED)
BARCODE_FG(PHTR)
CN1108-1
CN1108-2
CN2008-1
CN2008-2
LED
PHTR
SE-54 BOARD
BARCODE (LED)
BARCODE (PHTR)
JAM(PHTR)
JAM(LED)
CN1107-1
CN1107-2
CN1107-4
CN1107-5
CN2005-1
CN2005-2
CN2005-4
CN2005-5
BARCODE (LED)
BARCODE (PHTR)
PP_JAM(PHTR)
PP_JAM(LED)
PH2
BARCODE
RING
PP_JAM(LED)
PP_JAM(PHTR)
CN2004-1
CN2004-2
CN2007-1
CN2007-2
LED
PHTR
PH4
PAPER
JAM
SE-47 BOARD
SE-53 BOARD
PLT_MTR_A
PLT_MTR_nA
PLT_MTR_B
PLT_MTR_nB
STEP_MTR_(+)
STEP_MTR_(+)
CN1106-1
CN1106-2
CN1106-3
CN1106-4
CN1106-5
CN1106-6
MTR
PLATEN
MOTOR
FAN_MTR0
FAN_MTR1
CN1105-1
CN1105-2
MTR
FAN
MOTOR
HED_MTR0
HED_MTR1
CN1104-1
CN1104-2
CN2012-1
CN2012-2
HED_MTR0
HED_MTR1
MTR
M3
HEAD
MOTOR
SU-18 BOARD
HED_POS2
HED_POS1
HED_POS0
HED_POS1
HED_POS2
CN1103-2
CN1103-3
CN1103-4
CN1103-5
CN1103-6
2
3
4
5
6
HED_POS2
HED_POS1
HED_POS0
HED_POS1
HED_POS2
SE-26 BOARD
TO
PRT-2
BOARD
CN952
CN502-3
CN502-4
CN502-6
CN502-7
CN502-9
CN502-10
CN502-11
CN502-12
CN502-13
CN502-14
CN502-15
CN502-16
COLOR1
COLOR0
nPRNT_DREQ
PRNT_DCK
PRNT_D7
PRNT_D6
PRNT_D5
PRNT_D4
PRNT_D3
PRNT_D2
PRNT_D1
PRNT_D0
CN201-1
CN201-2
CN201-4
CN201-5
CN201-7
CN201-8
CN201-9
CN201-10
CN201-11
CN201-12
CN201-13
CN201-14
TO
FMY-17
BOARD
CN951
CN502-19
CN502-20
CN502-21
CN502-22
CN502-23
CN502-24
CN502-25
CN502-26
CN502-27
CN502-28
CN502-29
CN502-30
nRESET
PRT_SY_RTS
SY_PRT_CTS
PRT_SY_TXD
SY_PRT_RXD
KEY_DATA5
KEY_DATA4
KEY_DATA3
KEY_DATA2
KEY_DATA1
KEY_DATA0
KEY_EN
CN301-12
CN301-11
CN301-10
CN301-9
CN301-8
CN301-7
CN301-6
CN301-5
CN301-4
CN301-3
CN301-2
CN301-1
TO
SY-11
BOARD
CN951
SE-44 BOARD

SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

4-1. FRAME SCHEMATIC DIAGRAMS



IF-35

SY-II

SE-44

VA-7

IF-31

FMY-17

UPK-5500(Option Board FM

TO SENSORS

4 5 6 7 8 9 10 11 12 13 14 15

KEY-17

CN401

KEYBATA_5	9
KEYBATA_4	8
KEYBATA_3	7
KEYBATA_2	6
KEYBATA_1	5
KEYBATA_0	4
5V	3
KEYEN_0	2
GND	1

IF-35

CN101

1	5V
2	THRU_+EE
3	RGB_425_+525
4	GND

CN992

CN991

CN001

1	GND (-6V)
2	-6V
3	6V
4	GND (6V)
5	15V
6	GND (15V)
7	5V
8	5V
9	5V
10	GND (5V)
11	GND (5V)
12	GND (5V)

CN301

1	
2	
3	
4	
5	
6	IR_J_IN
7	IR_J_EN
8	GND
9	THRU_+EE
10	RGB_425_+525
11	GND
12	R_IN
13	BUSY
14	GND
15	PIN_1
16	PIN_2
17	PIN_3
18	PIN_4
19	PIN_5
20	PIN_6
21	PIN_7
22	PIN_8
23	GND
24	TXD
25	RXD
26	RTS
27	CTS
28	DSR
29	DTR
30	GND
31	A_15V
32	A_GND
33	A_15V
34	A_GND
35	A_6V
36	A_GND
37	A_6V
38	A_GND
39	A_M6V
40	A_MGND
41	A_M6V
42	A_MGND
43	5V
44	5V
45	5V
46	5V
47	GND
48	GND
49	GND
50	GND

SY-11

CN901

1	
2	
3	
4	
5	
6	IR_J_IN
7	IR_J_EN
8	GND
9	THRU_+EE
10	RGB_425_+525
11	GND
12	R_IN
13	BUSY
14	GND
15	PIN_1
16	PIN_2
17	PIN_3
18	PIN_4
19	PIN_5
20	PIN_6
21	PIN_7
22	PIN_8
23	GND
24	TXD
25	RXD
26	RTS
27	CTS
28	DSR
29	DTR
30	GND
31	A_15V
32	A_GND
33	A_15V
34	A_GND
35	A_6V
36	A_GND
37	A_6V
38	A_GND
39	A_M6V
40	A_MGND
41	A_M6V
42	A_MGND
43	5V
44	5V
45	5V
46	GND
47	GND
48	GND
49	GND
50	GND

CN601

A_GND	1
A_6V	2
A_6V	3
A_GND	4
A_MGND (+1V)	5
A_M6V (-5V)	6
A_GND	7
A_12V	8
A_15V	9
A_GND	10

CN601

1	GND_H
2	GND_H
3	GND_H
4	GND_H
5	GND_H
6	V_H
7	V_H
8	V_H
9	V_H
10	V_H
11	V_H
12	V_H
13	V_H
14	GND_H
15	GND_H
16	GND_H
17	GND_H
18	GND_H

IC1 M.M5812

PRT-2

CN401

GND	9
KEY_EN	8
5V	7
KEY_BATA0	6
KEY_BATA1	5
KEY_BATA2	4
KEY_BATA3	3
KEY_BATA4	2
KEY_BATA5	1

SE-44

CN952

KEY_EN	1
KEY_BATA0	2
KEY_BATA1	3
KEY_BATA2	4
KEY_BATA3	5
KEY_BATA4	6
KEY_BATA5	7
SY_MEC_RX0	8
MEC_SY_TX0	9
SY_MEC_CTS	10
MEC_SY_RTS	11
+RESET	12
GND	13
GND	14
PRNT_B0	15
PRNT_B1	16
PRNT_B2	17
PRNT_B3	18
PRNT_B4	19
PRNT_B5	20
PRNT_B6	21
PRNT_B7	22
GND	23
PRINT_BCK	24
PRNT_BREQ	25
GND	26
COLOR0	27
COLOR1	28
GND	29
GND	30

CN502

30	KEY_EN
29	KEY_BATA0
28	KEY_BATA1
27	KEY_BATA2
26	KEY_BATA3
25	KEY_BATA4
24	KEY_BATA5
23	SY_PNT_RX0
22	PNT_SY_TX0
21	SY_PNT_CTS
20	PNT_SY_RTS
19	+RESET
18	GND
17	GND
16	PRNT_B0
15	PRNT_B1
14	PRNT_B2
13	PRNT_B3
12	PRNT_B4
11	PRNT_B5
10	PRNT_B6
9	PRNT_B7
8	GND
7	PRINT_BCK
6	PRNT_BREQ
5	GND
4	COLOR0
3	COLOR1
2	GND
1	GND

CN501

KEY_EN	1
KEY_BATA0	2
KEY_BATA1	3
KEY_BATA2	4
KEY_BATA3	5
KEY_BATA4	6
KEY_BATA5	7
SY_PNT_RX0	8
PNT_SY_TX0	9
SY_PNT_CTS	10
PNT_SY_RTS	11
+RESET	12
GND	13

CN201

PRNT_B0	14
PRNT_B1	13
PRNT_B2	12
PRNT_B3	11
PRNT_B4	10
PRNT_B5	9
PRNT_B6	8
PRNT_B7	7
GND	6
PRINT_BCK	5
PRNT_BREQ	4
GND	3
COLOR0	2
COLOR1	1

IF-31

CN901

1	5V
2	THRU_+EE
3	RGB_625_+525
4	GND

CN951

HEB_POS_SENS0	1
HEB_POS_SENS1	2
HEB_POS_SENS2	3
PLT_POS_SENS	4
RBN_SENS	5
TRAY_SENS	6
RBN_CB_SENS	7
RBN_FB_SENS	8
BARCODE_SENS	9
LOAB_FB_SENS	10
BARCODE_FB_SENS	11
PP_JAM_SENS	12
SENS_CHCEK	13
RBN_CB_LED	14
RBN_FB_LED	15
BARCODE_LED	16
5V	17
5V	18
GND	19
GND	20
HEB_MTR0	21
HEB_MTR1	22
FAN_MTR0	23
FAN_MTR1	24
PLT_MTR_A	25
PLT_MTR_+A	26
PLT_MTR_B	27
PLT_MTR_+B	28
STEP_MOTOR_ (+)	29
STEP_MOTOR_ (+)	30

CN501

30	HEB_POS_SENS0
29	HEB_POS_SENS1
28	HEB_POS_SENS2
27	PLT_POS_SENS
26	RBN_SENS
25	TRAY_SENS
24	RBN_CB_SENS
23	RBN_FB_SENS
22	BARCODE_SENS
21	LOAB_FB_SENS
20	BARCODE_FB_SENS
19	PP_JAM_SENS
18	SENS_CHCEK
17	RBN_CB_LED
16	RBN_FB_LED
15	BARCODE_LED
14	5V
13	5V
12	GND
11	GND
10	HEB_MTR0
9	HEB_MTR1
8	FAN_MTR0
7	FAN_MTR1
6	PLT_MTR_A
5	PLT_MTR_+A
4	PLT_MTR_B
3	PLT_MTR_+B
2	STEP_MOTOR_ (+)
1	STEP_MOTOR_ (+)

CN1

LED	3
PHTR	2
GND	1

CN2

GND	1
PP_TYPE (LED	2
LOAE_TM0 (LED	3
LOAE_TM0 (PHTR0	4
PP_TYPE (PHTR0	5
GND	6

CN3

LOAB_MTR0	1
LOAB_MTR1	2

CN4

RBN_MTR0	1
RBN_MTR1	2

TO SENSORS

CN1107

1	BARCODE (LED
2	BARCODE (PHTR0
3	GND
4	JAM (PHTR0
5	JAM (LED

CN1103

HEB_POS2	6
HEB_POS1	5
HEB_POS0	4
HEB_POS1	3
HEB_POS2	2
GND	1

CN1104

PLT_MTR_A	1
PLT_MTR_+A	2
PLT_MTR_+B	3
PLT_MTR_B	4
STEP_MTR (+)	5
STEP_MTR (+)	6

CN1104

HEB_MTR0	1
HEB_MTR1	2

CN1105

FAN_MTR0	1
FAN_MTR1	2

CN1108

LED	1
PHTR	2
GND	3

TO SENSORS

VA-7

CN981

A_GND	1
A_6V	2
A_6V	3
A_GND	4
A_MGND (+1V)	5
A_M6V (-5V)	6
A_GND	7
A_12V	8
A_15V	9
A_GND	10

CN951

1	KEYEN_0
2	KEYBATA_0
3	KEYBATA_1
4	KEYBATA_2
5	KEYBATA_3
6	KEYBATA_4
7	KEYBATA_5
8	SY_MEC_TX0
9	MEC_SY_RX0
10	SY_MEC_RTS
11	MEC_SY_CTS
12	+RESET (D)
13	GND

CN281

GND	1
INPUT_SEL0	2
INPUT_SEL1	3
SET_525_+625	4
SET_525_+625	5
510_SET	6
ADC_ON_+OFF	7
GND	8
ADJ_L0	9
ADJ_CLK	10
ADJ_S1	11
ADJ_RESET	12

CN401

1	GND
2	INPUT_SEL0
3	INPUT_SEL1
4	SET_525_+625
5	SET_525_+625
6	510_SET
7	ADC_ON_+OFF
8	GND
9	ADJ_L0
10	ADJ_CLK
11	ADJ_S1
12	ADJ_RESET

CN282

SYNC_ON_+OFF	1
DSB_ON_+OFF	2
GND	3
DSB_BLK	4
DSB_R	5
DSB_G	6
DSB_B	7
GND	8
DSB_H0	9
DSB_V0	10

CN482

1	SYNC_ON_+OFF
2	DSB_ON_+OFF
3	GND
4	DSB_BLK
5	DSB_R
6	DSB_G
7	DSB_B
8	GND
9	DSB_H0
10	DSB_V0

CN402

GND	18
VIDEO_OUT	17
GND	16
GND	15
C_OUT	14
GND	13
Y_OUT	12
GND	11
GND	10
SYNC_OUT	9
GND	8
B_OUT	7
GND	6
G_OUT	5
GND	4
R_OUT	3
GND	2
GND	1

CN102

18	GND
17	VIDEO_OUT
16	GND
15	GND
14	C_OUT
13	GND
12	Y_OUT
11	GND
10	GND
9	SYNC_OUT
8	GND
7	B_OUT
6	GND
5	G_OUT
4	GND
3	R_OUT
2	GND
1	GND

CN401

GND	18
VIDEO_IN	17
GND	16
GND	15
C_IN	14
GND	13
Y_IN	12
GND	11
GND	10
SYNC_IN	9
GND	8
B_IN	7
GND	6
G_IN	5
GND	4
R_IN	3
GND	2
GND	1

CN101

18	GND
17	VIDEO_IN
16	GND
15	GND
14	C_IN
13	GND
12	Y_IN
11	GND
10	GND
9	SYNC_IN
8	GND
7	B_IN
6	GND
5	G_IN
4	GND
3	R_IN
2	GND
1	GND

CN201

GND	12
GAIN_ADJ	11
GND	10
+CLAMP	9
GND	8
AB_B	7
GND	6
AB_G	5
GND	4
AB_R	3
GND	2
GND	1

CN601

1	GND
2	GAIN_ADJ
3	GND
4	+CLAMP
5	GND
6	AB_B
7	GND
8	AB_G
9	GND
10	AB_R
11	GND
12	GND

CN202

GND	17
+EXT_V0	16
+EXT_H0	15
GND	14
INT_VF	13
+INT_V0	12
+INT_H0	11
GND	10
SNC_+MEMO	9
CO_ON_+OFF	8
GND	7
BA_B	6
GND	5
BA_G	4
GND	3
BA_R	2
GND	1

CN602

1	GND
2	+EXT_V0
3	+EXT_H0
4	GND
5	INT_VF
6	+INT_V0
7	+INT_H0
8	GND
9	SNC_+MEMO
10	CO_ON_+OFF
11	GND
12	BA_B
13	GND
14	BA_G
15	GND
16	BA_R
17	GND

FMY-17

CN951

1	PRNT_B0
2	PRNT_B1
3	PRNT_B2
4	PRNT_B3
5	PRNT_B4
6	PRNT_B5
7	PRNT_B6
8	PRNT_B7
9	GND
10	PRNT_BCK
11	+PRNT_BREQ
12	GND
13	COLOR0
14	COLOR1

CN301

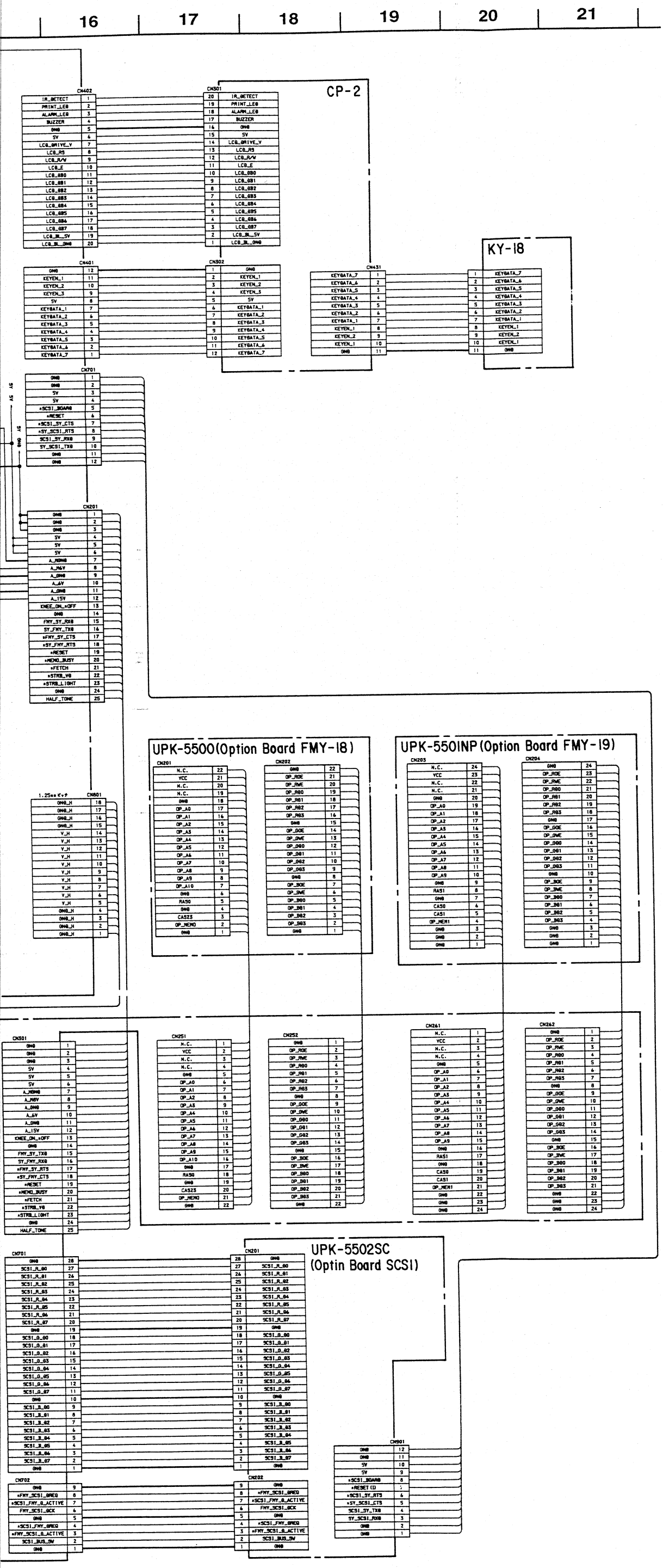
GND	
GND	
GND	
5V	
5V	
5V	
A_MG	
A_M	
A_GN	
A_6	
A_GN	
A_1	
KNEE_ON	
GN	
FMY_ST	
SY_FMY	
+FMY_S	
+SY_FM	
+RES	
+MEMO_	
+FET	
+STRB	
+STRB_	
GN	
HALF_	

CN701

GN	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
GN	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
GN	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
SCSI_	
GN	

CN702

GN	
+FMY_SC	
+SCSI_FMY	
FMY_SC	
GN	
+SCSI_FM	
+FMY_SCSI	
SCSI_B	
GN	


16
17
18
19
20
21
CP-2
KY-18
UPK-5500(Option Board FMY-18)
UPK-5501NP(Option Board FMY-19)
UPK-5502SC
(Optin Board SCSI)
CN402
CN301
CN401
CN302
CN431
CN701
CN201
CN801
CN202
CN203
CN204
CN501
CN251
CN252
CN261
CN262
CN901
IR_DETECT
PRINT_LED
ALARM_LED
BUZZER
GND
5V
LCD_DRIVE_V
LCD_RS
LCD_R/W
LCD_E
LCD_DB0
LCD_DB1
LCD_DB2
LCD_DB3
LCD_DB4
LCD_DB5
LCD_DB6
LCD_DB7
LCD_BL_5V
LCD_BL_GND
KEYDATA_7
KEYDATA_6
KEYDATA_5
KEYDATA_4
KEYDATA_3
KEYDATA_2
KEYDATA_1
KEYEN_1
KEYEN_2
KEYEN_3
SCSI_BOARD
*RESET
*SCSI_SY_CTS
*SY_SCSI_RTS
SCSI_SY_RXD
SY_SCSI_TXD
*MEMO_BUSY
*FETCH
*STRB_V0
*STRB_LIGHT
HALF_TONE
N.C.
VCC
OP_ROE
OP_RWE
OP_RD0
OP_RD1
OP_RD2
OP_RD3
OP_WE0
OP_WE1
OP_WE2
OP_WE3
OP_A0
OP_A1
OP_A2
OP_A3
OP_A4
OP_A5
OP_A6
OP_A7
OP_A8
OP_A9
OP_A10
RAS0
RAS1
CAS0
CAS1
CAS2S
OP_MEMO
OP_MEM1
SCSI_R_D0
SCSI_R_D1
SCSI_R_D2
SCSI_R_D3
SCSI_R_D4
SCSI_R_D5
SCSI_R_D6
SCSI_R_D7
SCSI_D_D0
SCSI_D_D1
SCSI_D_D2
SCSI_D_D3
SCSI_D_D4
SCSI_D_D5
SCSI_D_D6
SCSI_D_D7
SCSI_B_D0
SCSI_B_D1
SCSI_B_D2
SCSI_B_D3
SCSI_B_D4
SCSI_B_D5
SCSI_B_D6
SCSI_B_D7
*FMY_SCSI_BREQ
*SCSI_FMY_B_ACTIVE
FMY_SCSI_BCK
*SCSI_FMY_BREQ
*FMY_SCSI_B_ACTIVE
SCSI_BUS_5V
1.25mm ピッチ

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

- **For Printed Wiring Boards.**
- ▬▬ : Soldering Side.
- ▬▬ : Component Side.

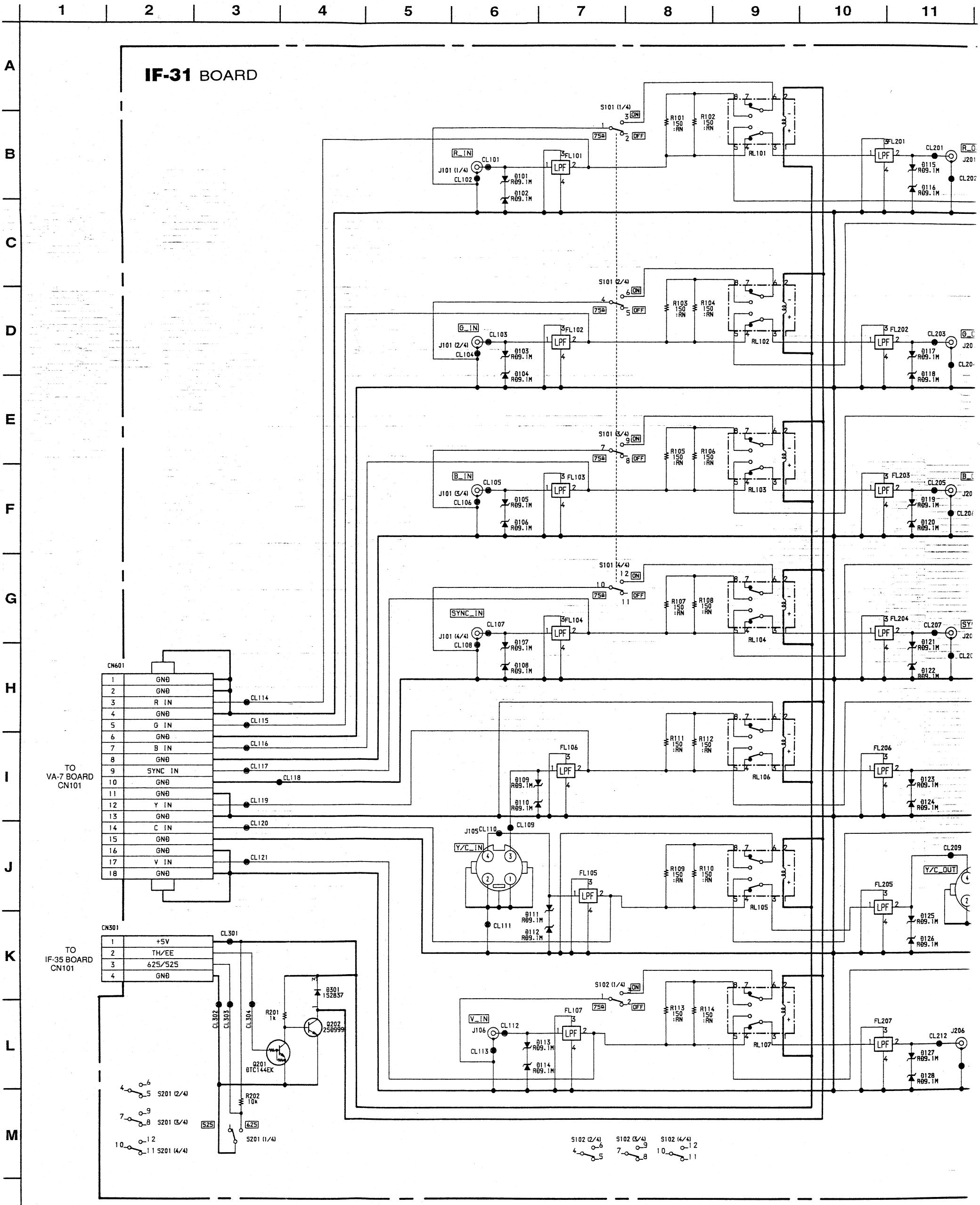
- **For Schematic Diagrams.**
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/10W unless otherwise noted.
  kΩ: 1000Ω, MΩ: 1000kΩ.
- All capacitors are in μF unless otherwise noted.
  pF: μμF.
  50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusibe resistor.
- ▭ : adjustment for repeair.
- ▬▬ : B+ Line.
- ▬ ▬ ▬ : B− Line.
- Voltages are dc between ground and measurement points.
- Readings are taken with a color-bar signal input.
- Readings are taken with a digital multimeter (DC10MΩ).
- Voltage variations may be noted due to normal production tolerances.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une trame et par une marque ⚠ sont d'une importance critique pour la sécurité. Ne les remplacer que par des pièces de numéro spécifié.

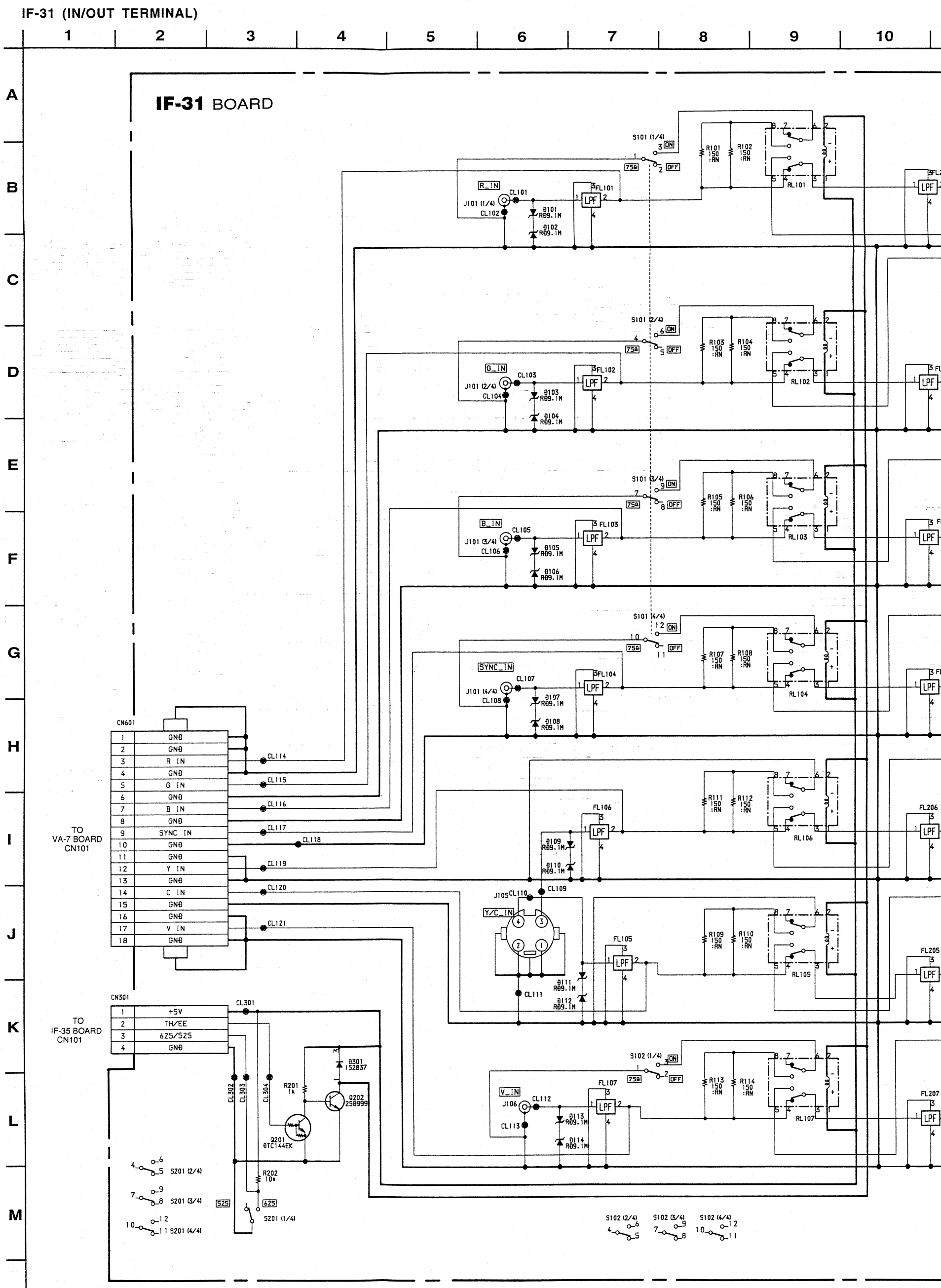
I/O TERMINAL	I/O TERMINAL
IF-31	IF-31

IF-31 BOARD


1 2 3 4 5 6 7 8 9 10 11
A B C D E F G H I J K L M N
S101 (1/4) ON OFF 75Ω
S101 (2/4) ON OFF 75Ω
S101 (3/4) ON OFF 75Ω
S101 (4/4) ON OFF 75Ω
R101 150 :RN
R102 150 :RN
R103 150 :RN
R104 150 :RN
R105 150 :RN
R106 150 :RN
R107 150 :RN
R108 150 :RN
R109 150 :RN
R110 150 :RN
R111 150 :RN
R112 150 :RN
R113 150 :RN
R114 150 :RN
RL101
RL102
RL103
RL104
RL105
RL106
RL107
R_IN
G_IN
B_IN
SYNC_IN
Y/C_IN
V_IN
J101 (1/4)
J101 (2/4)
J101 (3/4)
J101 (4/4)
J105
J106
CL101 CL102 CL103 CL104 CL105 CL106 CL107 CL108 CL109 CL110 CL111 CL112 CL113
D101 R09.1M
D102 R09.1M
D103 R09.1M
D104 R09.1M
D105 R09.1M
D106 R09.1M
D107 R09.1M
D108 R09.1M
D109 R09.1M
D110 R09.1M
D111 R09.1M
D112 R09.1M
D113 R09.1M
D114 R09.1M
FL101 FL102 FL103 FL104 FL105 FL106 FL107
LPF
FL201 FL202 FL203 FL204 FL205 FL206 FL207
CL201 CL202 CL203 CL205 CL207 CL209 CL212
D115 R09.1M
D116 R09.1M
D117 R09.1M
D118 R09.1M
D119 R09.1M
D120 R09.1M
D121 R09.1M
D122 R09.1M
D123 R09.1M
D124 R09.1M
D125 R09.1M
D126 R09.1M
D127 R09.1M
D128 R09.1M
J201 J202 J203 J204 J205 J206
Y/C_OUT
CN601
1 GND
2 GND
3 R IN
4 GND
5 G IN
6 GND
7 B IN
8 GND
9 SYNC IN
10 GND
11 GND
12 Y IN
13 GND
14 C IN
15 GND
16 GND
17 V IN
18 GND
CL114 CL115 CL116 CL117 CL118 CL119 CL120 CL121
TO VA-7 BOARD CN101
CN301
1 +5V
2 TH/EE
3 625/525
4 GND
CL301 CL302 CL303 CL304
TO IF-35 BOARD CN101
D301 152837
R201 1k
Q201 DTC144EK
Q202 2SD999
R202 10k
525 625
S201 (1/4)
S201 (2/4)
S201 (3/4)
S201 (4/4)
S102 (1/4)
S102 (2/4)
S102 (3/4)
S102 (4/4)

IF-31 (IN/OUT TERMINAL)

IF-31 BOARD



9 10 11 12 13 14 15 16 17 18

R102 150 :RN
RL101
FL201 LPF
CL201 R_OUT J201 (1/4)
D115 R09.1M
D116 R09.1M
CL202

R104 150 :RN
RL102
FL202 LPF
CL203 G_OUT J201 (2/4)
D117 R09.1M
D118 R09.1M
CL204

R106 150 :RN
RL103
FL203 LPF
CL205 B_OUT J201 (3/4)
D119 R09.1M
D120 R09.1M
CL206

R108 150 :RN
RL104
FL204 LPF
CL207 SYNC_OUT J201 (4/4)
D121 R09.1M
D122 R09.1M
CL208

R112 150 :RN
RL106
FL206 LPF
D123 R09.1M
D124 R09.1M

R110 150 :RN
RL105
FL205 LPF
CL209 CL210 J205 Y/C_OUT
D125 R09.1M
D126 R09.1M
CL211

R114 150 :RN
RL107
FL207 LPF
CL212 J206 V_OUT
D127 R09.1M
D128 R09.1M
CL213

CL214
CL215
CL216
CL217
CL218
CL219
CL220

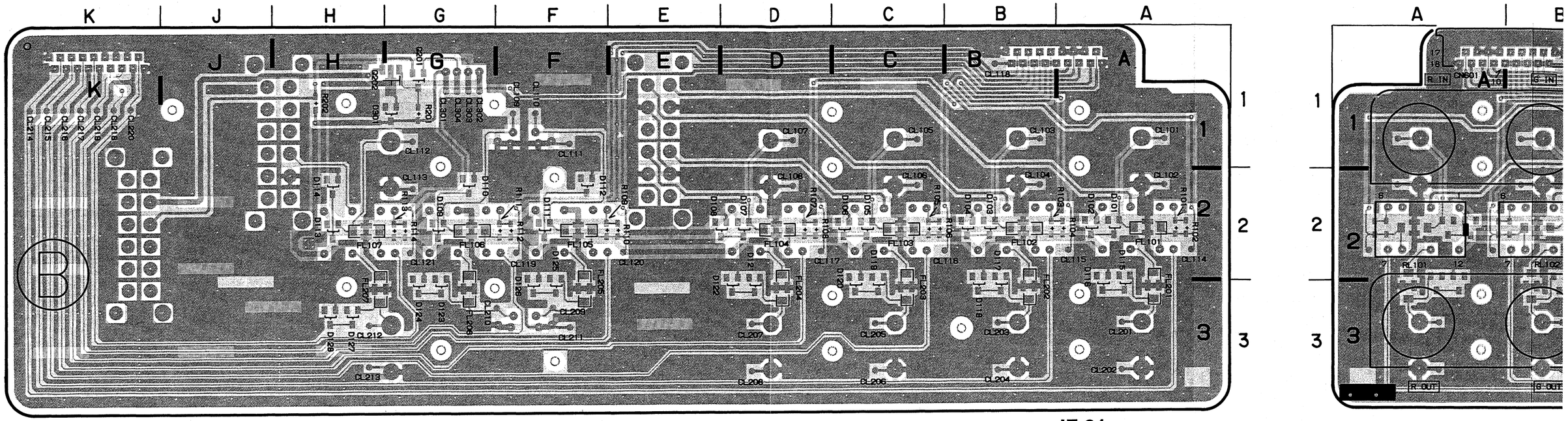
CN602

GND	1
GND	2
R MONI	3
GND	4
G MONI	5
GND	6
B MONI	7
GND	8
SYNC MONI	9
GND	10
GND	11
Y MONI	12
GND	13
C MONI	14
GND	15
GND	16
V MONI	17
GND	18

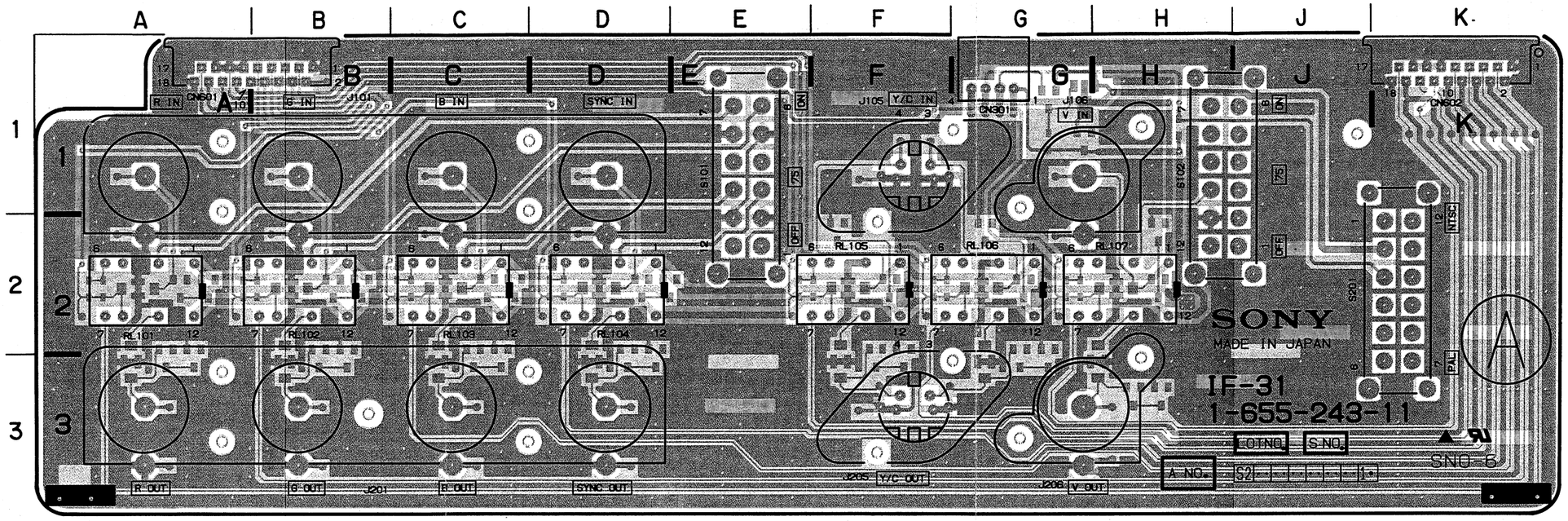
TO
VA-7 BOARD
CN102

I/O TERMINAL	I/O TERMINAL
IF-31	IF-31

IF-31 (IN/OUT TERMINAL)



IF-31 -SOLDERING SIDE-
1-655-243-11



IF-31 -COMPONENT SIDE-
1-655-243-11

IF-31 BOARD

CN301	G-1	
CN601	B-1	
CN602	K-1	
D101	A-2	S
D102	A-2	S
D103	B-2	S
D104	B-2	S
D105	C-2	S
D106	C-2	S
D107	D-2	S
D108	D-2	S
D109	G-2	S
D110	G-2	S
D111	F-2	S
D112	F-2	S
D113	H-2	S
D114	H-2	S
D115	A-3	S
D116	A-3	S
D117	B-3	S
D118	B-3	S
D119	C-3	S
D120	C-3	S
D121	D-3	S
D122	D-3	S
D123	G-3	S
D124	G-3	S
D125	F-3	S
D126	F-3	S
D127	H-3	S
D128	H-3	S
D301	G-1	S
FL101	A-2	S
FL102	B-2	S
FL103	C-2	S
FL104	D-2	S
FL105	F-2	S
FL106	G-2	S
FL107	H-2	S
FL201	A-3	S
FL202	B-3	S
FL203	C-3	S
FL204	D-3	S
FL205	F-3	S
FL206	G-3	S
FL207	H-3	S
J101	A-1	
J105	F-1	
J106	G-1	
J201	A-3	
J205	F-3	
J206	G-3	
Q201	G-1	S
Q202	G-1	S
RL101	A-2	
RL102	B-2	
RL103	C-2	
RL104	D-2	
RL105	F-2	
RL106	G-2	
RL107	H-2	
S101	E-2	
S102	J-2	
S201	K-2	

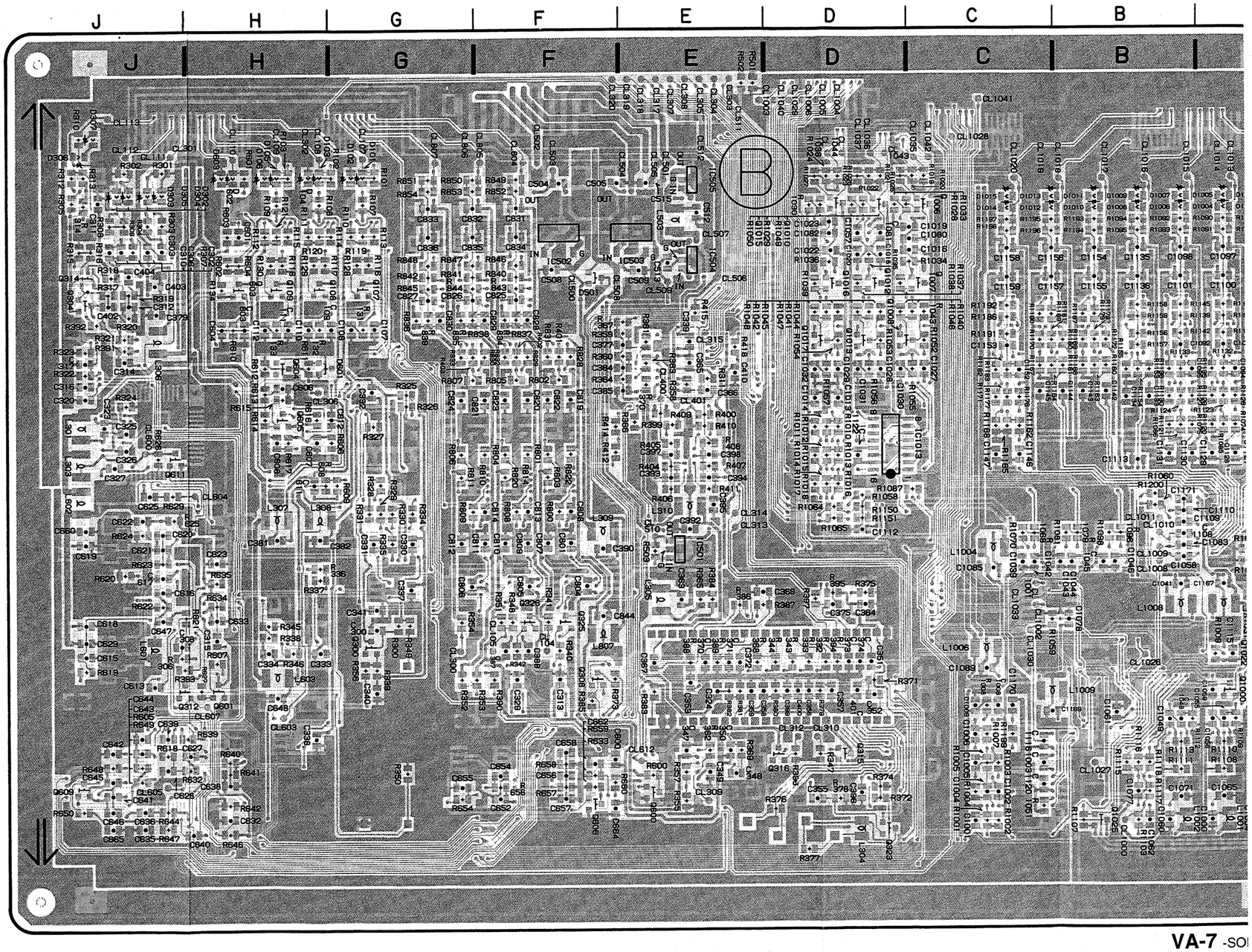
S:SOLDERING SIDE

VA-7 (ANALOG VIDEO)

VA-7 BOARD

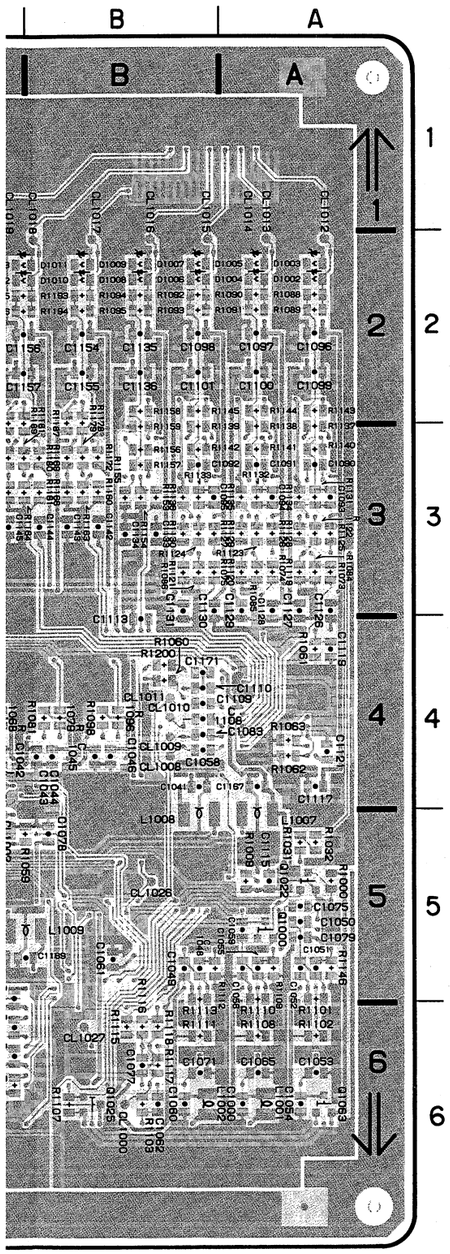
CN101	H-1		L305	E-4	S	Q1002	B-6	
CN102	B-1		L306	J-3	S	Q1003	D-3	
CN201	G-1		L307	H-4	S	Q1004	D-3	
CN202	C-1		L308	H-4	S	Q1005	D-4	
CN301	E-1		L309	F-4	S	Q1006	C-2	S
CN302	D-1		L310	E-4	S	Q1007	C-2	S
CN901	F-1		L501	F-2		Q1008	C-3	S
			L502	E-2		Q1009	C-3	
CV301	E-6		L503	E-2	S	Q1010	D-2	S
CV302	D-6		L601	J-5	S	Q1011	B-4	
CV601	J-5		L602	J-4	S	Q1012	D-2	S
CV602	J-4		L603	H-5	S	Q1013	D-3	S
CV1002	A-6		L807	F-5	S	Q1014	D-3	
CV1003	B-6		L1001	A-6	S	Q1015	D-2	S
CV1004	A-6		L1002	B-6	S	Q1016	D-2	S
			L1003	C-6		Q1017	D-3	S
DL301	G-5		L1004	C-4	S	Q1018	D-3	
DL302	D-6		L1006	C-5	S	Q1019	C-4	
D501	F-2	S	L1007	A-5	S	Q1020	C-6	
D601	H-3	S	L1008	B-5	S	Q1021	C-5	
D1001	B-6		L1009	B-5	S	Q1022	A-5	S
						Q1025	B-6	S
FL301	J-2		Q101	G-2		Q1026	A-5	
FL302	G-3		Q102	H-2		Q1028	B-6	
FL303	H-5		Q103	H-2		Q1029	A-5	
FL801	F-3		Q107	G-2	S	Q1030	B-5	
FL802	F-3		Q108	H-2	S	Q1031	A-3	
FL803	G-3		Q109	H-2	S	Q1032	A-3	
			Q300	G-5	S	Q1033	B-3	
IC301	J-3		Q301	J-2		Q1034	A-3	
IC302	G-4		Q302	J-2		Q1035	A-3	
IC303	H-5		Q303	J-2		Q1036	B-3	
IC305	D-5		Q304	J-2	S	Q1037	A-3	
IC306	F-4		Q305	J-2		Q1038	A-3	
IC307	F-4		Q306	G-3		Q1039	B-3	
IC308	F-4		Q307	G-4		Q1040	A-2	
IC309	E-3		Q308	F-5	S	Q1041	A-2	
IC310	E-3		Q309	G-4		Q1042	B-2	
IC311	F-5		Q310	H-4		Q1044	C-4	
IC312	F-5		Q311	J-3		Q1045	B-3	
IC313	E-6		Q312	H-5	S	Q1046	B-2	
IC400	E-2		Q313	H-5		Q1047	B-3	
IC401	E-3		Q314	J-2	S	Q1048	B-3	
IC501	E-4	S	Q315	D-6	S	Q1049	C-3	
IC502	F-2	S	Q316	D-6	S	Q1050	B-2	
IC503	E-2	S	Q323	D-6	S	Q1051	B-2	
IC504	E-2	S	Q325	F-5	S	Q1052	C-3	
IC505	E-2	S	Q326	F-5	S	Q1055	C-2	
IC600	F-6		Q327	F-5		Q1058	C-3	
IC601	H-3		Q400	D-3		Q1060	B-4	
IC602	H-4		Q600	E-6	S	Q1062	B-4	
IC603	H-4		Q601	H-5	S	Q1063	A-6	S
IC604	J-6		Q602	H-2				
IC607	F-6		Q603	H-2	S	RV101	G-2	
IC608	F-6		Q604	H-3	S	RV102	H-2	
IC609	F-6		Q605	H-3	S	RV103	H-2	
IC610	J-6		Q606	F-6	S	RV301	D-6	
IC800	F-4		Q609	J-6	S	RV302	D-4	
IC801	F-4		Q611	J-3	S	RV303	E-3	
IC802	F-4		Q800	F-4		RV304	E-3	
IC1001	D-2		Q801	F-4		RV305	F-5	
IC1002	D-2		Q802	F-4		RV306	F-5	
IC1004	A-4		Q804	F-4		RV307	D-6	
IC1005	B-4		Q805	F-4		RV308	G-4	
IC1006	B-5		Q806	F-4		RV400	E-2	
IC1007	A-5		Q807	F-3		RV1001	C-2	
IC1010	B-6		Q808	F-3		RV1002	D-2	
IC1011	A-4		Q809	F-3		RV1003	D-2	
IC1012	B-5		Q810	F-3		RV1007	A-3	
IC1013	D-3	S	Q811	F-3				
IC1015	A-5		Q812	G-3		X302	D-6	
IC1016	D-4		Q813	F-2		X303	D-4	
			Q814	F-2		X601	J-5	
LV301	C-6		Q815	G-2		X602	J-4	
			Q816	F-2		X603	J-4	
L300	H-3		Q817	F-2		X1002	A-6	
L301	J-3	S	Q818	G-2		X1003	B-6	
L303	J-4	S	Q1000	A-5	S	X1004	A-6	
L304	D-6	S	Q1001	C-6				

S:SOLDERING SIDE

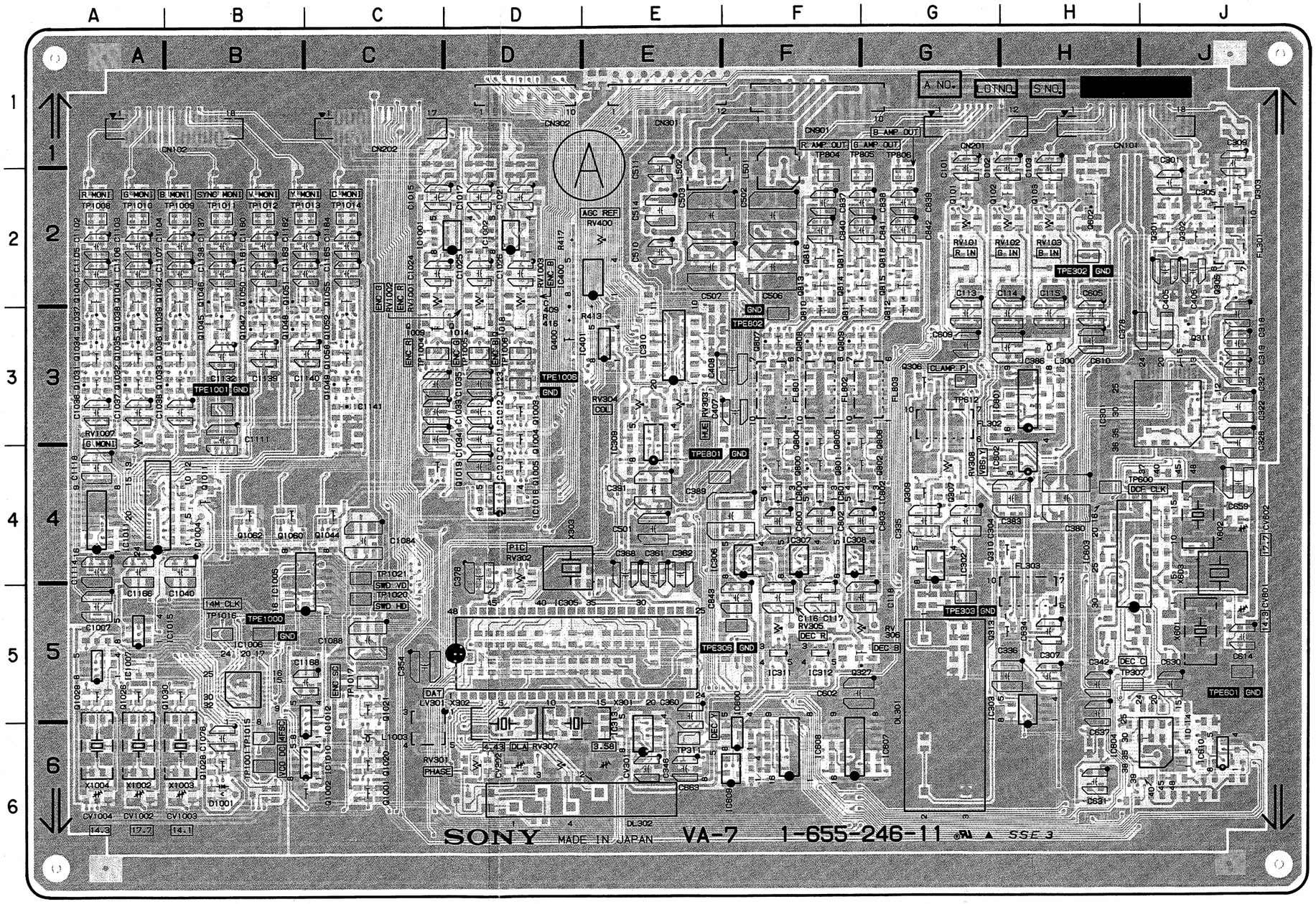


VA-7 -SO
1-655-246-11

ANALOG VIDEO VA-7



VA-7 -SOLDERING SIDE-
1-655-246-11



VA-7 -COMPONENT SIDE-
1-655-246-11

VA-7 —1/6— (ANALOG VIDEO) VA-7 —2/6— (ANALOG VIDEO)

9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21

R 3/6
G 3/6
B 3/6
TO VA-7 BOARD (3/6)

V/S 2/6
θCFCLK_Y 2/6
TO VA-7 BOARD (2/6)

IC302
SW

Q307,Q309
AMP

Q307
XN4501

Q309
2SC1623

IC302
NJM2233BM

Q300
BUFF

Q300
2SA812

FL302

RV308
500
VBS_Y

E303

BL301
BL

IC303
SW

Q313
AMP

Q313
2SC1623

IC303
NJM2233BM

FL303

5V

L603
3.3

θEC_Y 3/6
TO VA-7 BOARD (3/6)

RGB/ETC 3/6
θCF_C 2/6
TO VA-7 BOARD (2/6)

θCF_COUT 2/6
θCF_YOUT 2/6

SWθ_CP 3/6
AGC_CP 3/6
CLAMP_P 3/6

IC610
SW

IC610
TC4W53F

CL306

Hθ/BF 3/6

IC604
SYNC
SEPARATOR

IC604
CXA1437Q

Q609
2SC1623
Q609
INV.

θEC_Vθ 3/6
TO VA-7 BOARD (3/6)

EXT_Hθ 3/6

EXT_CSYNC 4/6 TO VA-7 BOARD (4/6)
N/_P 3/6 TO VA-7 BOARD (3/6)
θEC_SC 2/6 TO VA-7 BOARD (2/6)

TO VA-7 BOARD (1/6)

VA-7 (2/6) BOARD

1/6 C_IN
1/6 θCFCLK_Y
1/6 θCF_YOUT
1/6 θCF_COUT
1/6 θCF_VIN

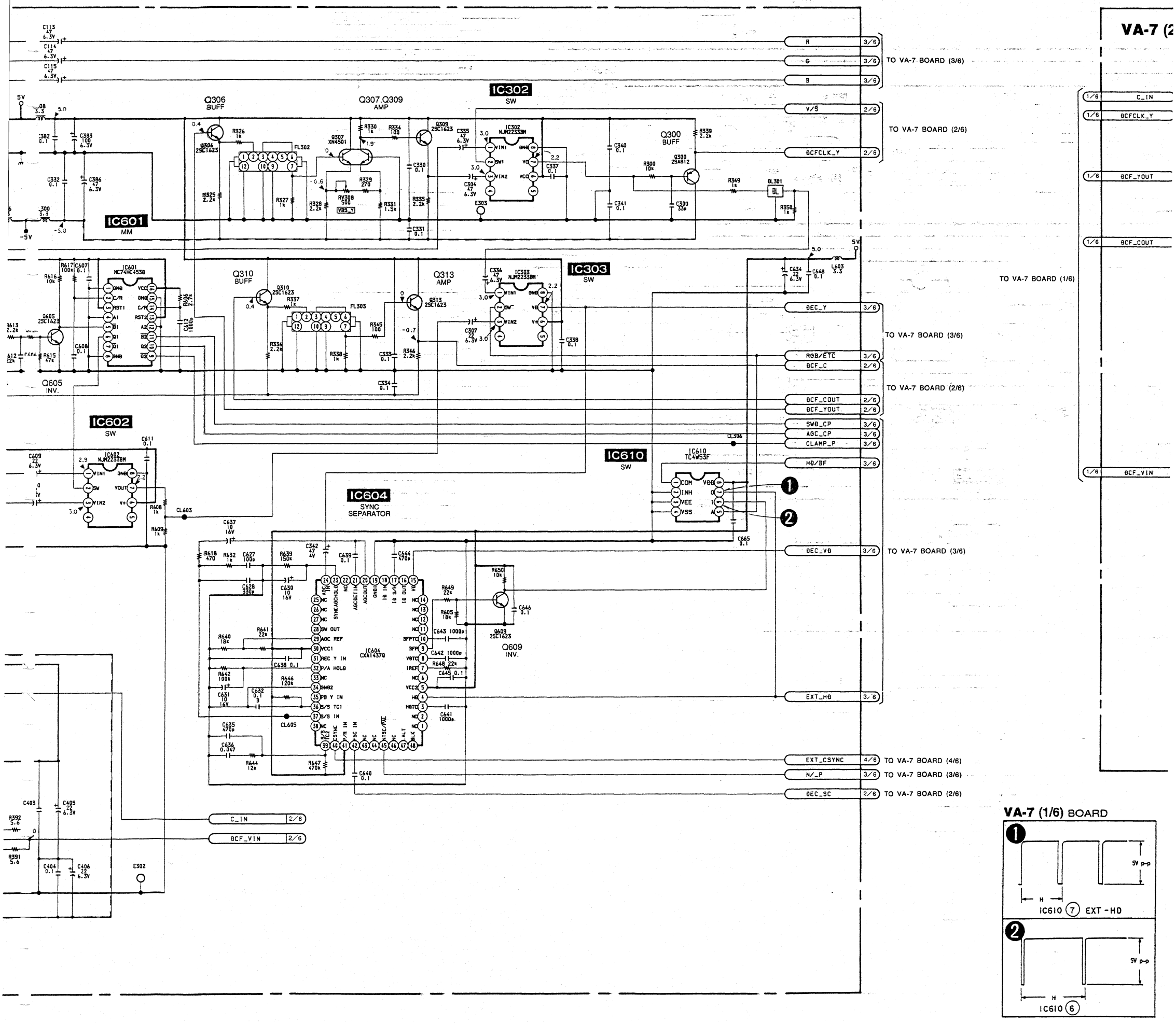
IC301
MC141625

IC301
DIGITAL
COMB
FILTER

VA-7 (1/6) BOARD

1
5V p-p
H
IC610 (7) EXT-Hθ

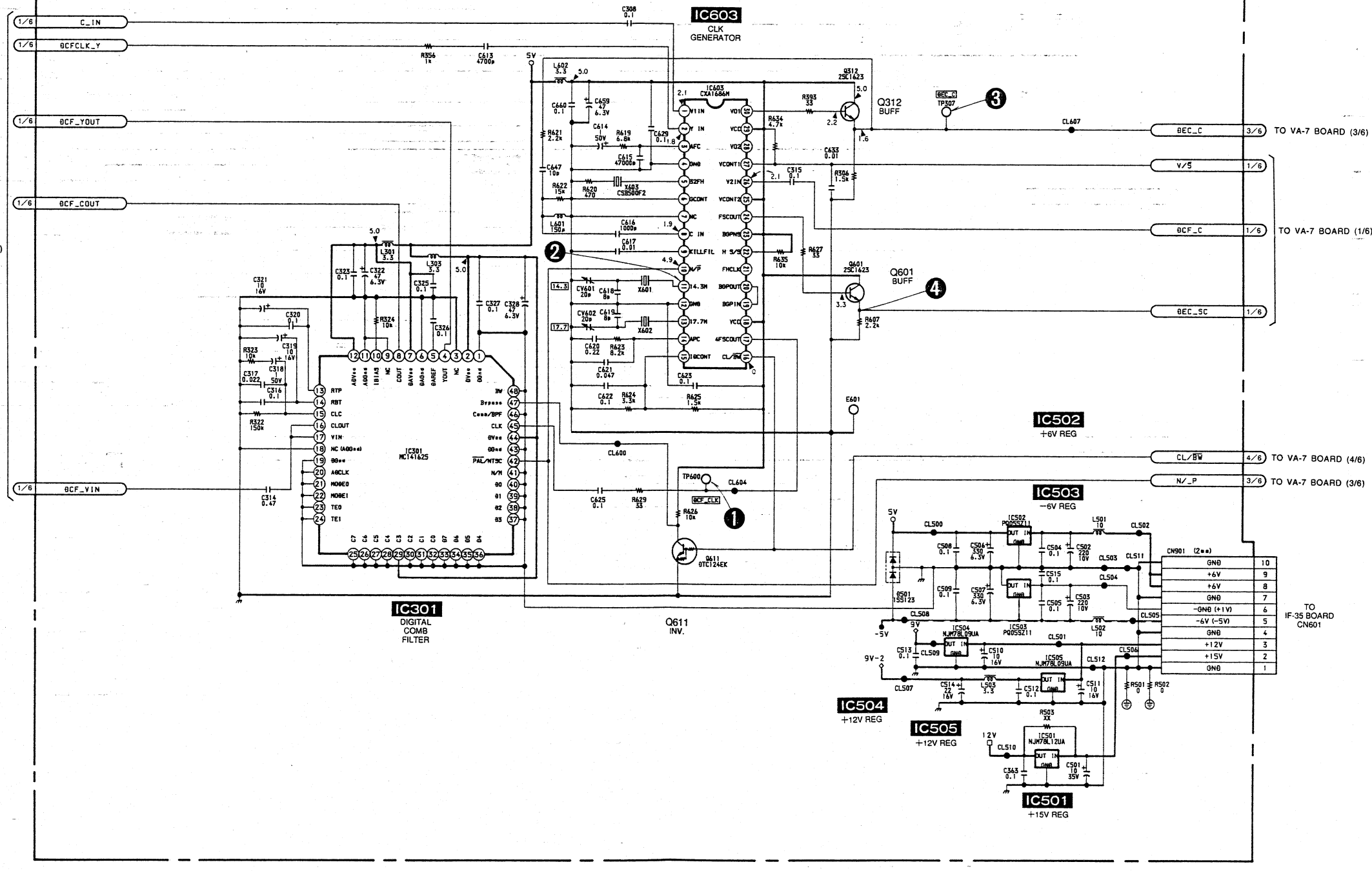
2
5V p-p
H
IC610 (6)


6
7
8
9
10
11
12
13
14
15
16
17
18
IC601
MM
IC602
SW
IC604
SYNC SEPARATOR
IC610
SW
IC302
SW
IC303
SW
Q306
BUFF
Q307,Q309
AMP
Q310
BUFF
Q313
AMP
Q605
INV.
Q609
INV.
Q300
BUFF
FL302
FL303
E302
E303
CL603
CL605
CL306
R
G
B
V/S
ØCFCLK_Y
ØEC_Y
RGB/ETC
ØCF_C
ØCF_COUT
ØCF_YOUT
SWØ_CP
AGC_CP
CLAMP_P
HØ/BF
ØEC_VØ
EXT_HØ
EXT_CSYNC
N/_P
ØEC_SC
C_IN
ØCF_VIN
TO VA-7 BOARD (3/6)
TO VA-7 BOARD (2/6)
TO VA-7 BOARD (1/6)
TO VA-7 BOARD (4/6)
VA-7 (2
1/6 C_IN
1/6 ØCFCLK_Y
1/6 ØCF_YOUT
1/6 ØCF_COUT
1/6 ØCF_VIN

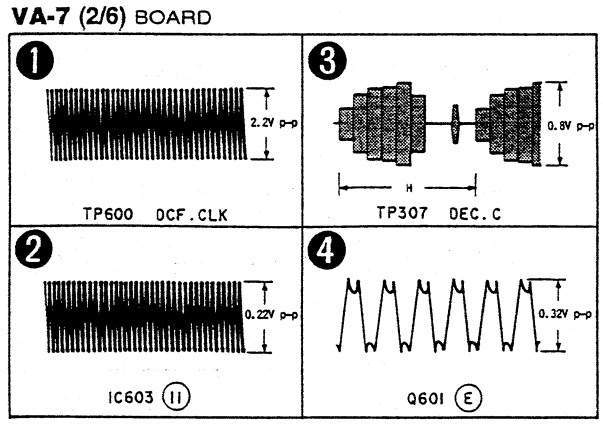
VA-7 (1/6) BOARD

1
5V p-p
H
IC610 (7) EXT-HD
2
5V p-p
H
IC610 (6)

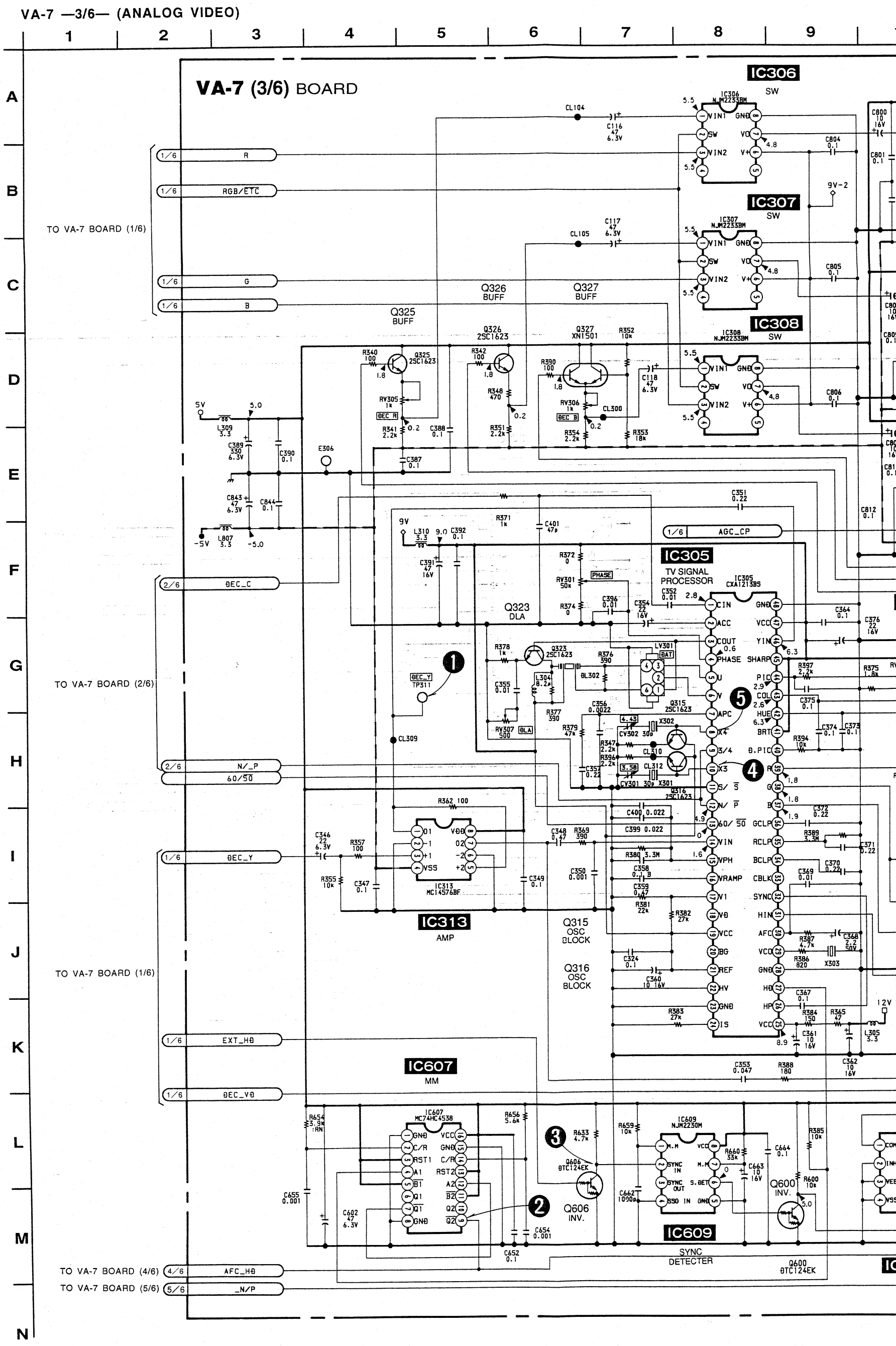
VA-7 (2/6) BOARD



VA-7 (2/6) BOARD

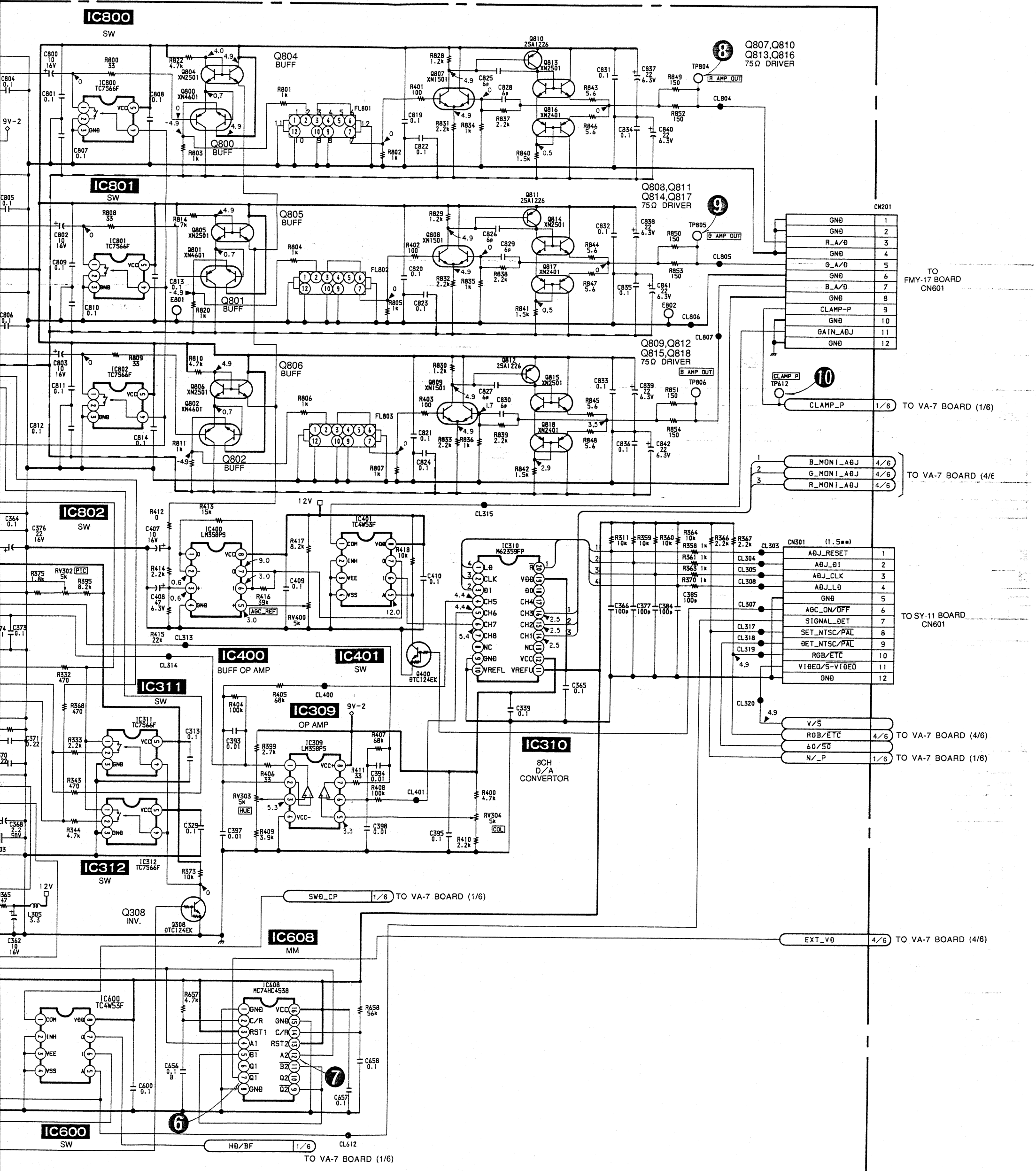


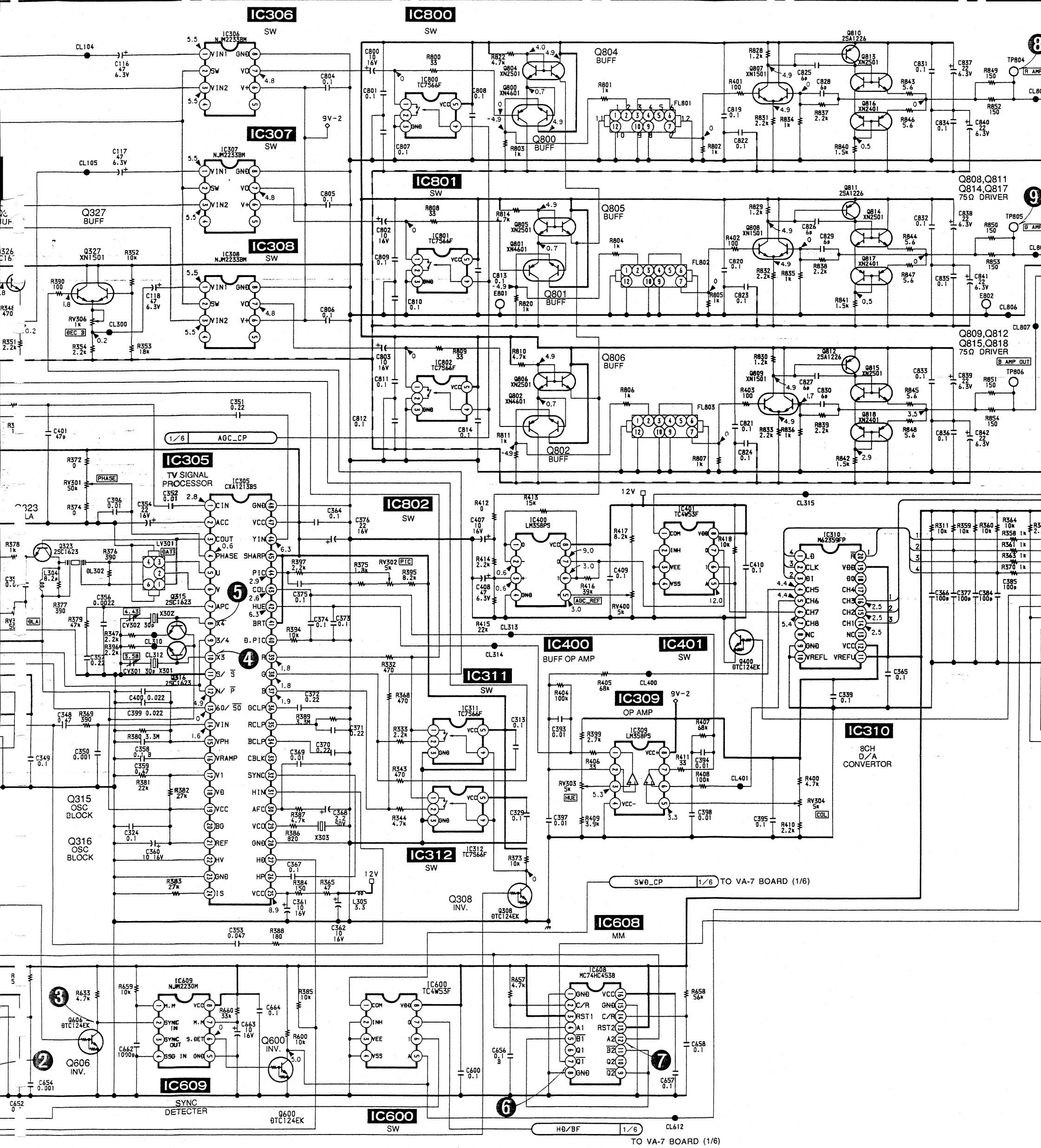
VA-7 —3/6— (ANALOG VIDEO)

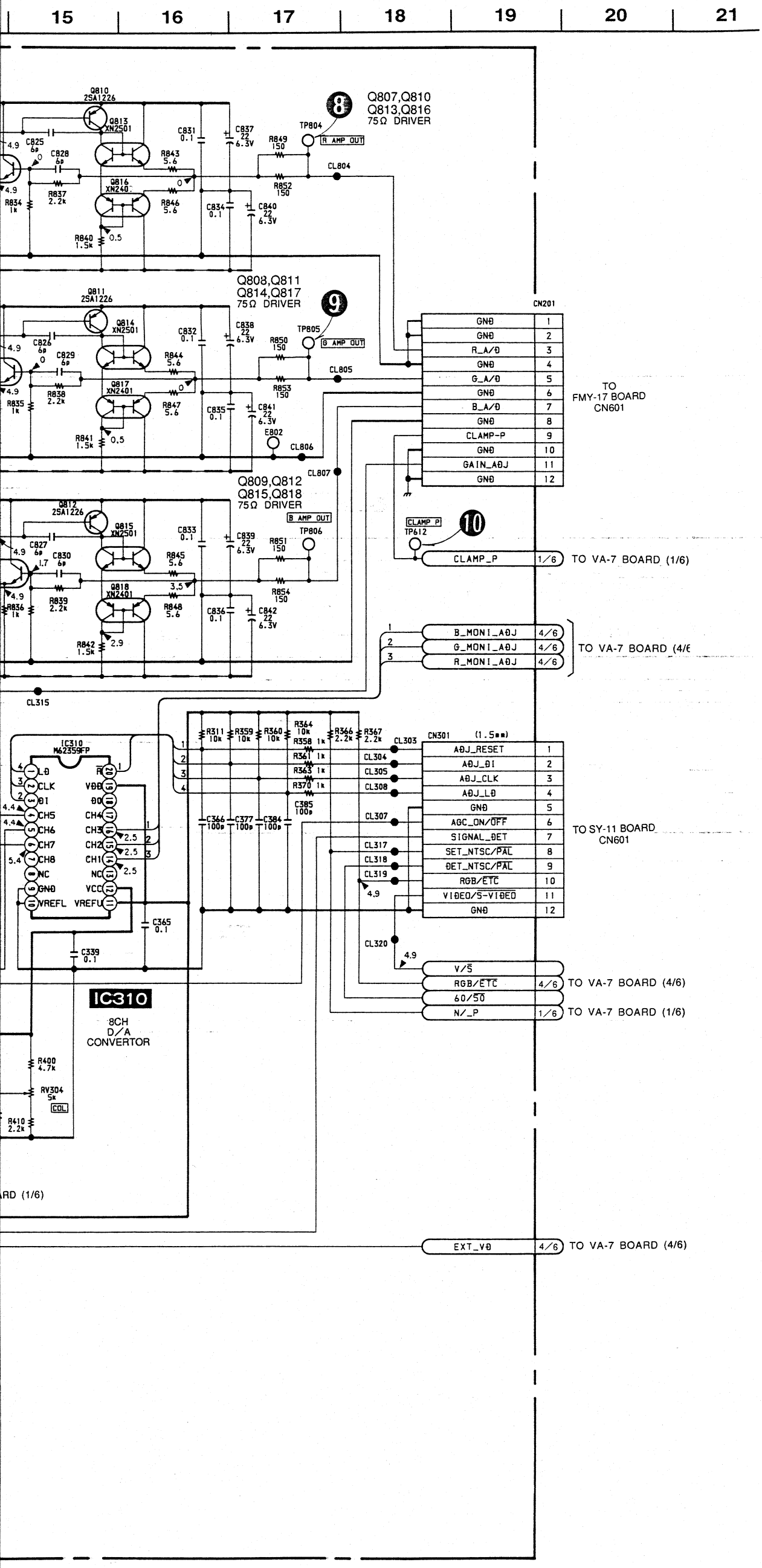


ANALOG VIDEO VA-7

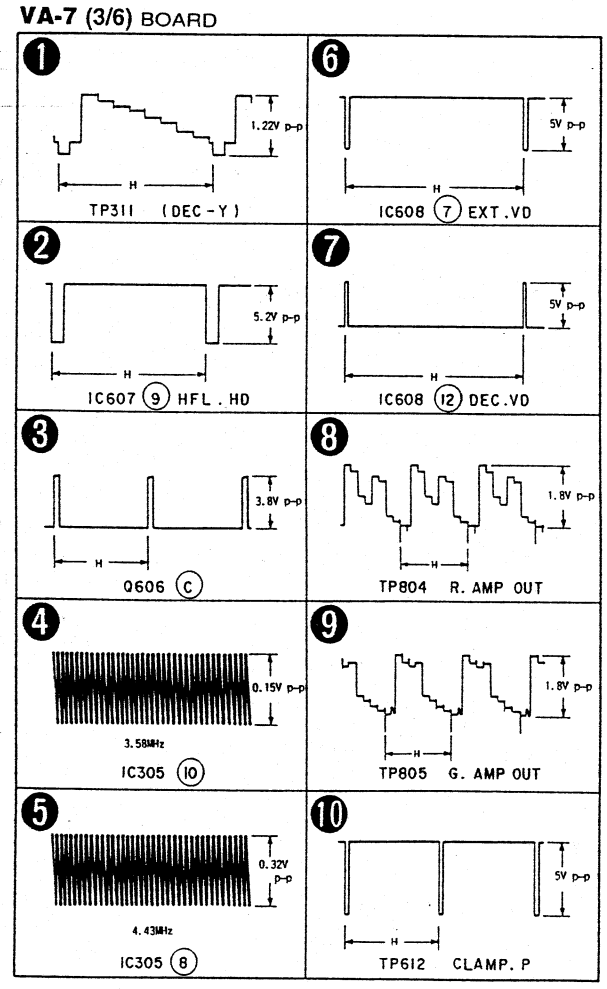
ANALOG VIDEO VA-7


IC800
SW
IC800 TC7S66F
Q804 BUFF
Q800 BUFF
FL801
Q807,Q810
Q813,Q816
75Ω DRIVER
R AMP OUT
TP804
CL804
IC801
SW
IC801 TC7S66F
Q805 BUFF
Q801 BUFF
FL802
Q808,Q811
Q814,Q817
75Ω DRIVER
G AMP OUT
TP805
CL805
CL806
CL807
IC802
SW
IC802 TC7S66F
Q806 BUFF
Q802 BUFF
FL803
Q809,Q812
Q815,Q818
75Ω DRIVER
B AMP OUT
TP806
CLAMP P
TP612
CL315
IC400
BUFF OP AMP
IC401
SW
IC401 TC4W53F
IC400 LM358PS
IC310
M62359FP
IC310
8CH
D/A
CONVERTOR
IC311
SW
IC311 TC7S66F
IC309
OP AMP
IC309 LM358PS
IC312
SW
IC312 TC7S66F
Q308
INV.
IC608
MM
IC608 MC74HC4538
IC600
SW
IC600 TC4W53F
CN201
GNΘ 1
GNΘ 2
R_A/Θ 3
GNΘ 4
G_A/Θ 5
GNΘ 6
B_A/Θ 7
GNΘ 8
CLAMP-P 9
GNΘ 10
GAIN_AΘJ 11
GNΘ 12
TO FMY-17 BOARD CN601
CLAMP_P 1/6
TO VA-7 BOARD (1/6)
B_MONI_AΘJ 4/6
G_MONI_AΘJ 4/6
R_MONI_AΘJ 4/6
TO VA-7 BOARD (4/6)
CN301 (1.5mm)
AΘJ_RESET 1
AΘJ_ΘI 2
AΘJ_CLK 3
AΘJ_LΘ 4
GNΘ 5
AGC_ON/OFF 6
SIGNAL_ΘET 7
SET_NTSC/PAL 8
ΘET_NTSC/PAL 9
RGB/ETC 10
VIΘEO/S-VIΘEO 11
GNΘ 12
TO SY-11 BOARD CN601
V/S
RGB/ETC 4/6
60/50
N/_P 1/6
TO VA-7 BOARD (4/6)
TO VA-7 BOARD (1/6)
SWΘ_CP 1/6
TO VA-7 BOARD (1/6)
EXT_VΘ 4/6
TO VA-7 BOARD (4/6)
HΘ/BF 1/6
CL612
TO VA-7 BOARD (1/6)

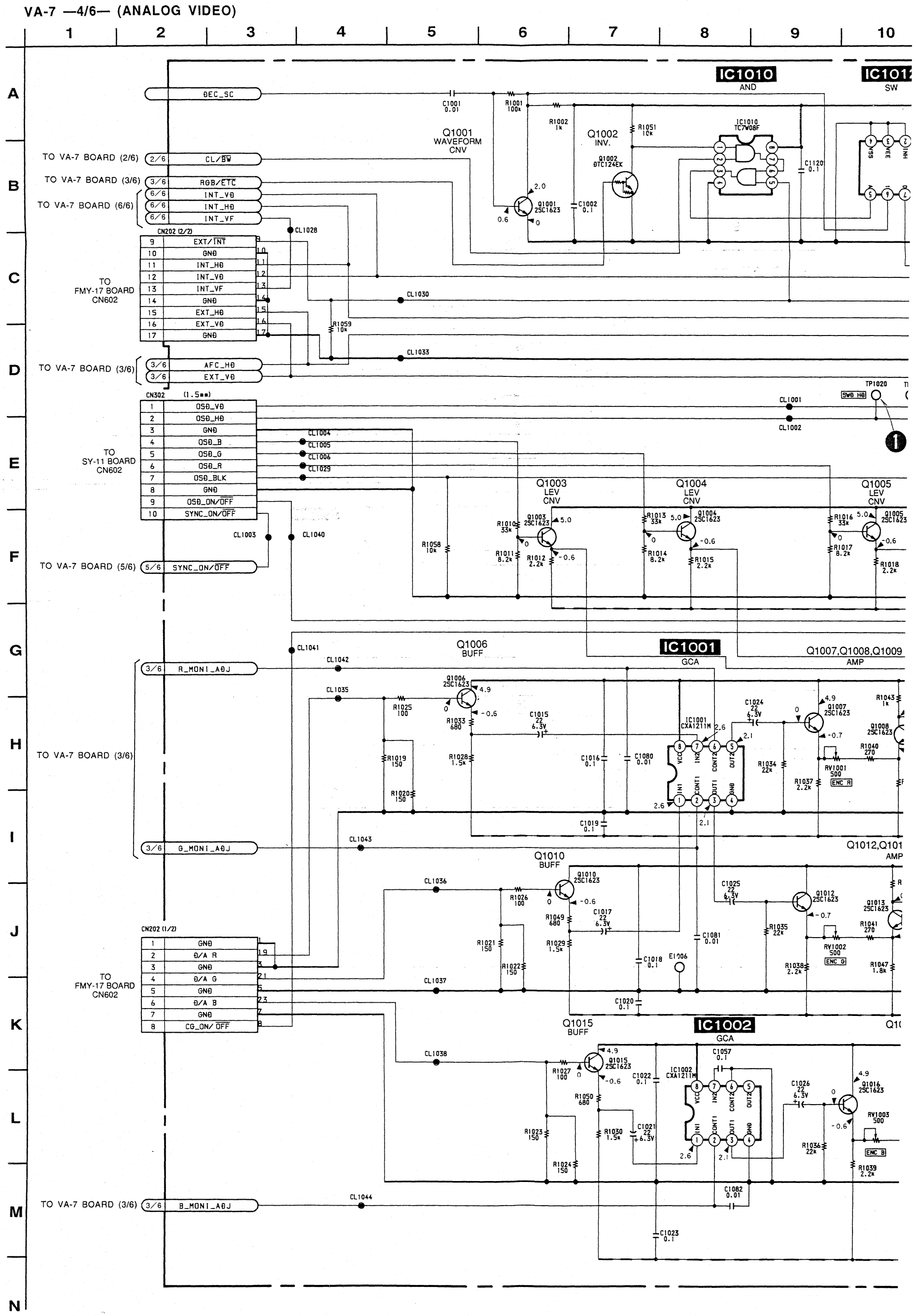

IC306
SW
IC307
SW
IC308
SW
IC800
SW
IC801
SW
IC802
SW
IC305
TV SIGNAL PROCESSOR
IC309
OP AMP
IC310
8CH D/A CONVERTOR
IC311
SW
IC312
SW
IC400
BUFF OP AMP
IC401
SW
IC600
SW
IC608
MM
IC609
SYNC DETECTER
Q315 OSC BLOCK
Q316 OSC BLOCK
Q327 BUFF
Q800 BUFF
Q801 BUFF
Q802 BUFF
Q804 BUFF
Q805 BUFF
Q806 BUFF
Q808,Q811 Q814,Q817 75Ω DRIVER
Q809,Q812 Q815,Q818 75Ω DRIVER
Q308 INV.
Q606 INV.
Q600 INV.
AGC_CP
SW0_CP
TO VA-7 BOARD (1/6)
H0/BF
TO VA-7 BOARD (1/6)
R AMP OUT
B AMP OUT


15
16
17
18
19
20
21
Q810 2SA1226
Q813 XN2501
Q816 XN2401
8
Q807,Q810
Q813,Q816
75Ω DRIVER
TP804
R AMP OUT
CL804
Q811 2SA1226
Q814 XN2501
Q817 XN2401
9
Q808,Q811
Q814,Q817
75Ω DRIVER
TP805
G AMP OUT
CL805
CL806
CL807
Q812 2SA1226
Q815 XN2501
Q818 XN2401
Q809,Q812
Q815,Q818
75Ω DRIVER
B AMP OUT
TP806
CL315
CLAMP P
TP612
10
CLAMP_P 1/6 TO VA-7 BOARD (1/6)
B_MONI_AØJ 4/6
G_MONI_AØJ 4/6
R_MONI_AØJ 4/6
TO VA-7 BOARD (4/6)
IC310
M62359FP
8CH
D/A
CONVERTOR
CN201
GNØ 1
GNØ 2
R_A/Ø 3
GNØ 4
G_A/Ø 5
GNØ 6
B_A/Ø 7
GNØ 8
CLAMP-P 9
GNØ 10
GAIN_AØJ 11
GNØ 12
TO FMY-17 BOARD CN601
CN301 (1.5sq)
AØJ_RESET 1
AØJ_ØI 2
AØJ_CLK 3
AØJ_LØ 4
GNØ 5
AGC_ON/OFF 6
SIGNAL_ØET 7
SET_NTSC/PAL 8
ØET_NTSC/PAL 9
RGB/ETC 10
VIØEO/S-VIØEO 11
GNØ 12
TO SY-11 BOARD CN601
V/S
RGB/ETC 4/6 TO VA-7 BOARD (4/6)
60/50
N/_P 1/6 TO VA-7 BOARD (1/6)
EXT_VØ 4/6 TO VA-7 BOARD (4/6)
IC310
8CH
D/A
CONVERTOR
RD (1/6)

VA-7 (3/6) BOARD


1
1.22V p-p
H
TP311 (DEC-Y)
6
5V p-p
H
IC608 (7) EXT.VD
2
5.2V p-p
H
IC607 (9) HFL.HD
7
5V p-p
H
IC608 (12) DEC.VD
3
3.8V p-p
H
Q606 (C)
8
1.8V p-p
H
TP804 R. AMP OUT
4
0.15V p-p
3.58MHz
IC305 (10)
9
1.8V p-p
H
TP805 G. AMP OUT
5
0.32V p-p
4.43MHz
IC305 (8)
10
5V p-p
H
TP612 CLAMP. P

VA-7 —4/6— (ANALOG VIDEO)



VA-7 (4/6) BOARD

IC1010 AND

IC1012 SW

IC1005 SW

IC1016 AND

IC1013 SW

IC1002 GCA

Q1020,Q1021 LPF

Q1005 LEV CNV

Q1007,Q1008,Q1009 AMP

Q1012,Q1013,Q1014 AMP

Q1016,Q1017,Q1018 AMP

Q1019 INV.

Q1044 BUFF

Q1060 BUFF

Q1062 BUFF

ENC_SC 5/6 TO VA-7 BC

INT_SC 6/6 TO VA-7 BC

INT_CSYNC 6/6

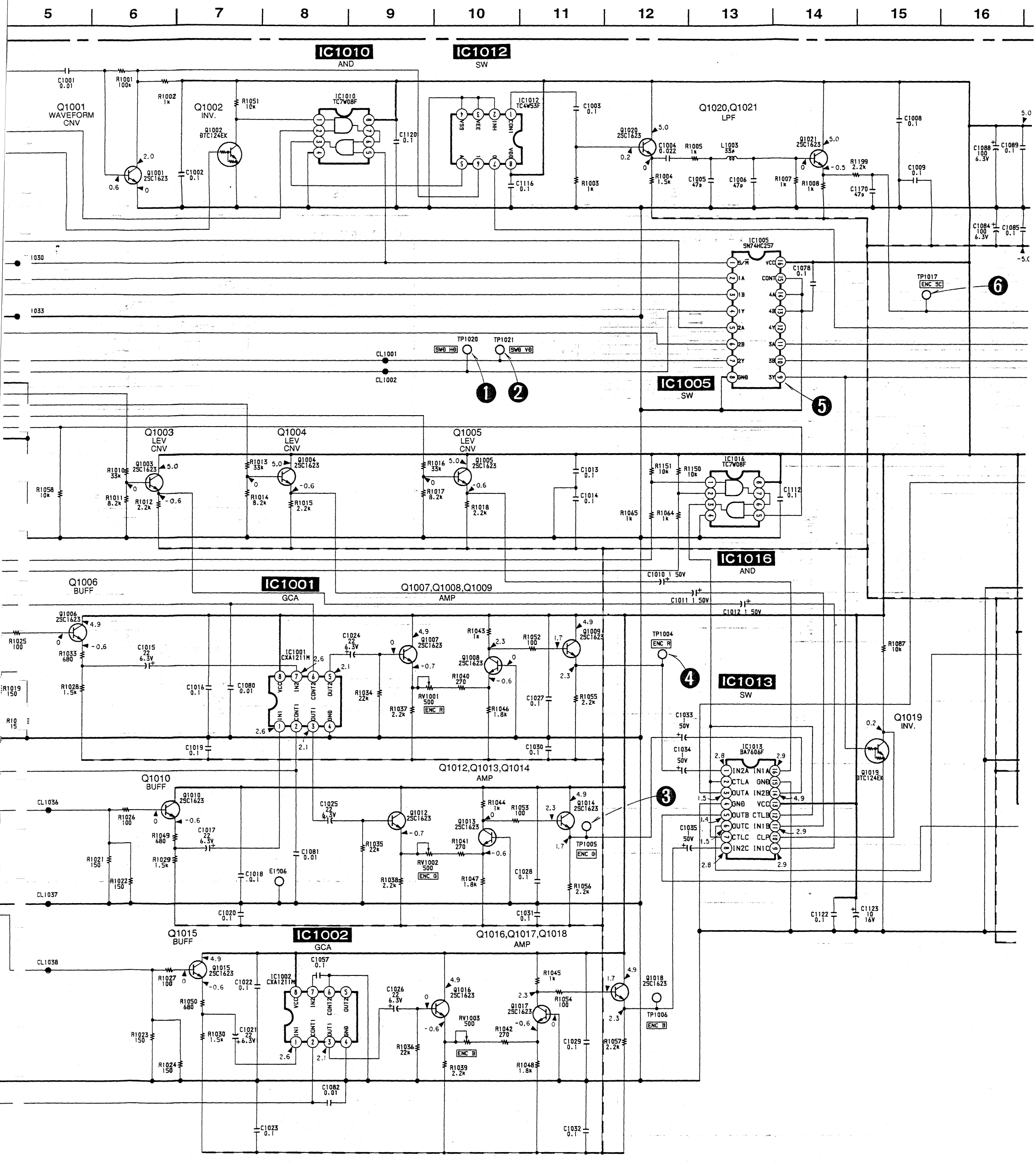
EXT_CSYNC 1/6 TO VA-7 BC

ENC_CSYNC 5/6

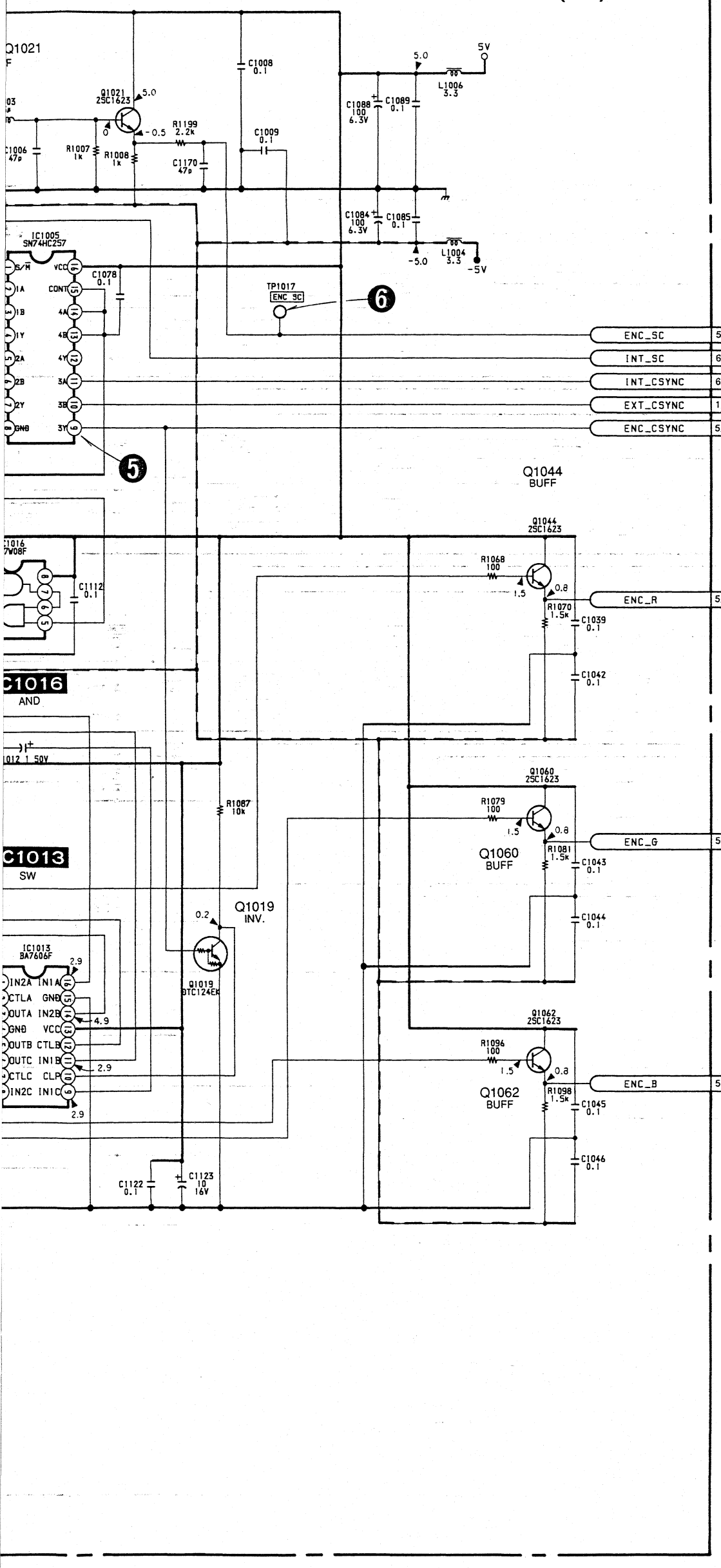
ENC_R 5/6 TO VA-7 BC

ENC_G 5/6

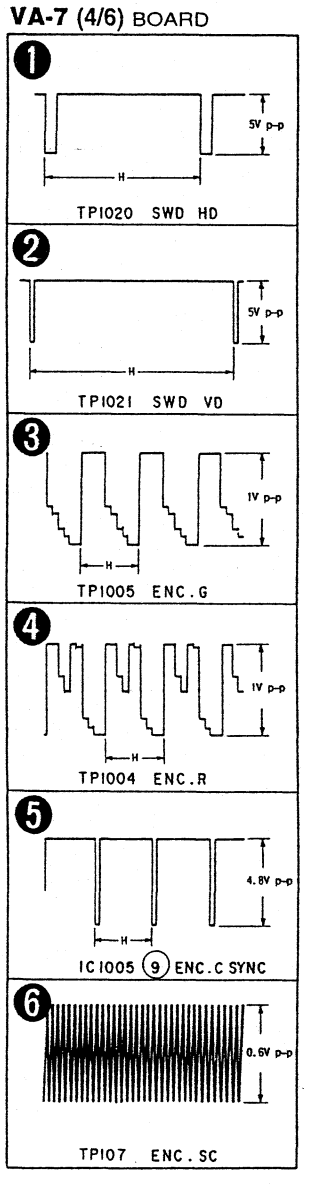
ENC_B 5/6

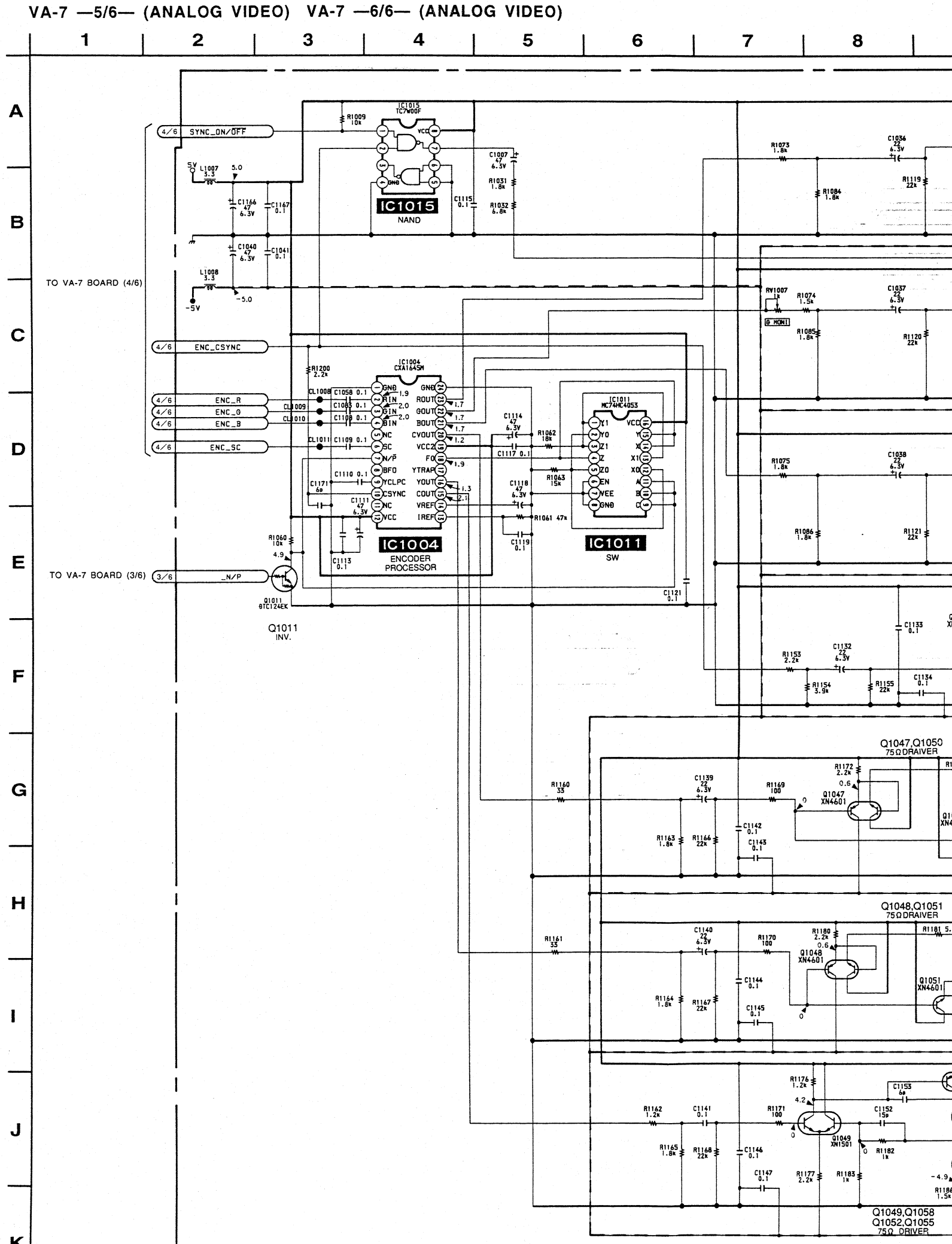

5
6
7
8
9
10
11
12
13
14
15
16
IC1010
AND
IC1012
SW
Q1001
WAVEFORM
CNV
Q1002
INV.
Q1020,Q1021
LPF
IC1005
SN74HC257
IC1005
SW
Q1003
LEV
CNV
Q1004
LEV
CNV
Q1005
LEV
CNV
IC1016
AND
Q1006
BUFF
IC1001
GCA
Q1007,Q1008,Q1009
AMP
IC1013
SW
Q1019
INV.
Q1010
BUFF
Q1012,Q1013,Q1014
AMP
Q1015
BUFF
IC1002
GCA
Q1016,Q1017,Q1018
AMP
TP1020
SW0 H0
TP1021
SW0 V0
TP1017
ENC SC
TP1004
ENC R
TP1005
ENC G
TP1006
ENC B
CL1001
CL1002
CL1036
CL1037
CL1038
1030
1033
1
2
3
4
5
6

VA-7 (4/6) BOARD



VA-7 (4/6) BOARD




VA-7 —5/6— (ANALOG VIDEO)
VA-7 —6/6— (ANALOG VIDEO)
1 2 3 4 5 6 7 8
A B C D E F G H I J K
4/6 SYNC_ON/OFF
TO VA-7 BOARD (4/6)
4/6 ENC_CSYNC
4/6 ENC_R
4/6 ENC_G
4/6 ENC_B
4/6 ENC_SC
TO VA-7 BOARD (3/6) 3/6 _N/P
IC1015 TC7W00F
IC1015 NAND
IC1004 CXA1645M
IC1004 ENCODER PROCESSOR
IC1011 MC74HC4053
IC1011 SW
Q1011 BTC124EK
Q1011 INV.
Q1047,Q1050 75Ω DRAIVER
Q1048,Q1051 75Ω DRAIVER
Q1049,Q1058 Q1052,Q1055 75Ω DRIVER
Q1047 XN4601
Q1048 XN4601
Q1051 XN4601
Q1049 XN1501
G MONI
ANALOG VIDEO
VA-7
ANALOG VIDEO
VA-7

9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21

VA-7 (5/6) BOARD

Q1031,Q1034
Q1037,Q1040
75Ω DRIVER

Q1032,Q1035
Q1038,Q1041
75Ω DRIVER

Q1033,Q1036
Q1039,Q1042
75Ω DRIVER

Q1045,Q1046
75Ω DRAIVER

TP1008 R_MONI
TP1010 G_MONI
TP1009 B_MONI
TP1011 SYNC_MONI
TP1012 V_MONI
TP1013 Y_MONI
TP1014 C_MONI

CN102 (1/3)

GND	1
GND	2
R_MONI	3
GND	4
G_MONI	5
GND	6
B_MONI	7
GND	8
SYNC_MONI	9
GND	10

CN102 (2/3)

GND	11
Y_MONI	12
GND	13
C_MONI	14
GND	15

CN102 (3/3)

GND	16
V_MONI	17
GND	18

TO IF-31 BOARD CN602

E1001

VA-7 (6/6) BOARD

Q1063
SW

Q1063 DTA124EK
Q1022 DTC124EK

TO VA-7 BOARD (4/6)

4/6 INT_CSYNC
4/6 INT_VF
4/6 INT_HD

_N/P
N/_P

VA-7 (5/6) BOARD

1 TP1008 R. MONI — 1.5V p-p, H
2 TP1010 G. MONI — 2V p-p, H
3 TP1011 SYNC. MONI — 1.6V p-p, H
4 TP1012 V. MONI — 2.5V p-p, H
5 TP1013 Y. MONI — 1.8V p-p, H
6 TP1014 C. MONI — 1.5V p-p, H

VA-7 (5/6) BOARD

Q1031,Q1034
Q1037,Q1040
75Ω DRIVER

Q1032,Q1035
Q1038,Q1041
75Ω DRIVER

Q1033,Q1036
Q1039,Q1042
75Ω DRIVER

Q1045,Q1046
75Ω DRAIVER

Q1047,Q1050
75Ω DRAIVER

Q1048,Q1051
75Ω DRAIVER

Q1049,Q1058
Q1052,Q1055
75Ω DRIVER

TO
IF-31 BOARD
CN602

TO VA-7 BOAR

CN102 (1/3)

GND	1
GND	2
R_MONI	3
GND	4
G_MONI	5
GND	6
B_MONI	7
GND	8
SYNC_MONI	9
GND	10

CN102 (2/3)

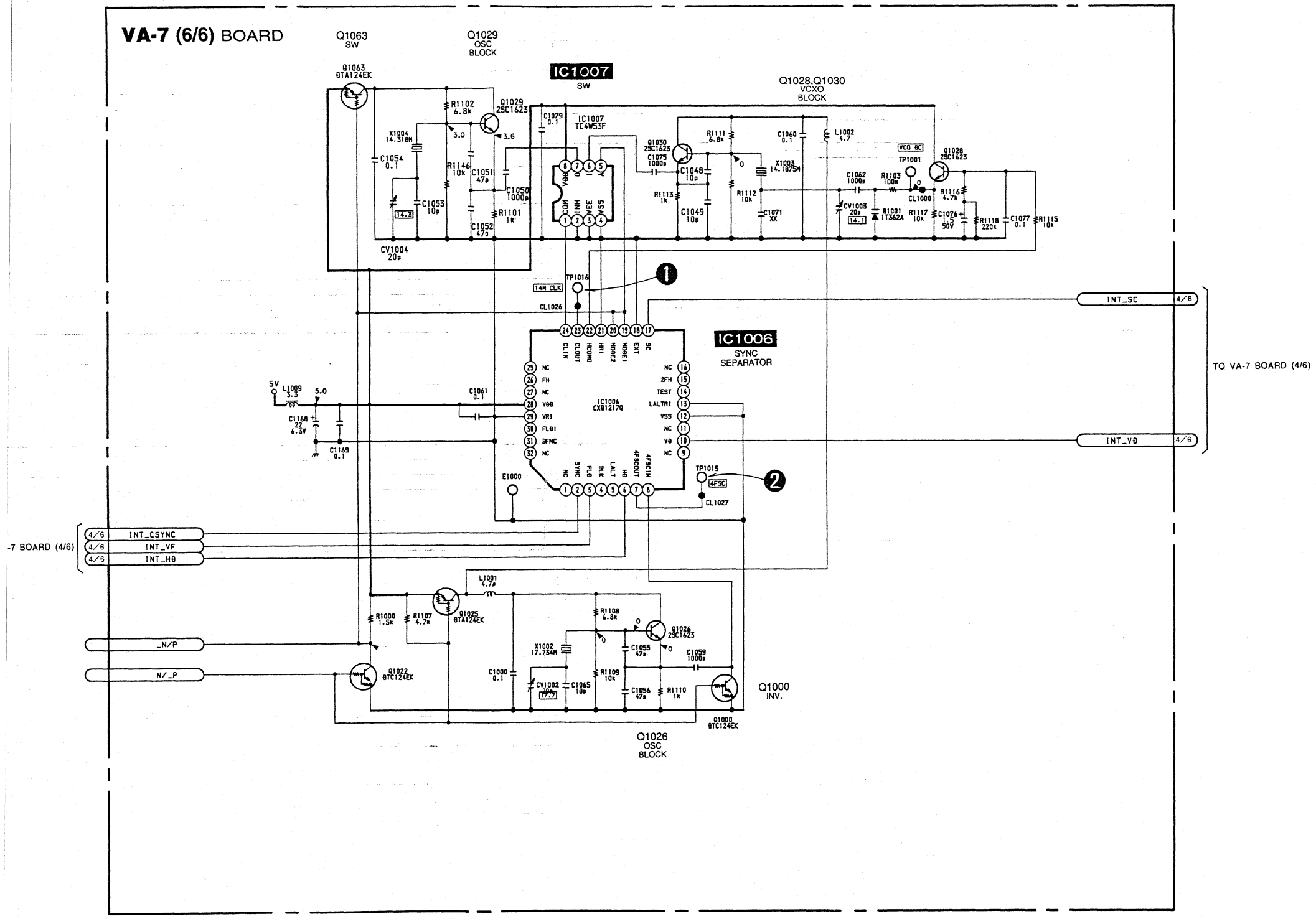
GND	11
Y_MONI	12
GND	13
C_MONI	14
GND	15

CN102 (3/3)

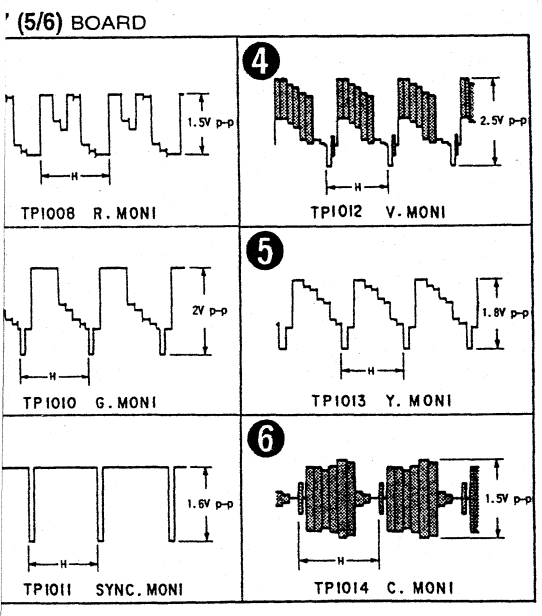
GND	16
V_MONI	17
GND	18

VA-7 (5/6)

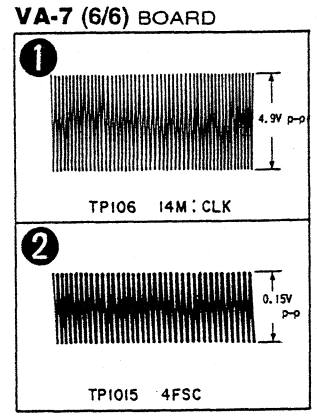
VA-7 (6/6) BOARD



VA-7 (5/6) BOARD



VA-7 (6/6) BOARD



FMY-17 (1/6) BOARD

IC008
CLAMP & AMP

IC001
+12V REG

IC002
+5V REG

IC003
−5V REG

IC101
D/A CONVERTER

Q104,Q107
75 OHM DRAIVER

Q101
SW

IC008 LM1201

IC009 LM1201

IC010 LM1201

IC101 CX01178Q

Q101 DTC124EK

Q102 XN4601

Q103 XN4601

Q104 XN4601

Q105 XN4601

Q106 XN4601

Q107 XN4601

CN601	TO VA-7
12	GND
11	GND
10	R_A/D
9	GND
8	G_A/D
7	GND
6	B_A/D
5	GND
4	CLAMP_P
3	GND
2	GAIN_ADJ
1	GND

TO VA-7 BOARD CN201

CN301 (2/3)	TO SY-11
13	KNEE_ON_nOFF
12	A_15V
11	A_GND
10	A_6V
9	A_GND
8	A_M6V
7	A_MGND

TO SY-11 BOARD CN201

TO FMY-17 BOARD (3/6)

IC008
CLAMP & AMP

IC008 LM1201
GNΘ, CLPC, VREF, CONT, CLPP, CLP+, GNΘ, VOUT, VIN, VCC, CONTC, CONTC, VCC, ΘRV, VCC, CLP-
C030 0.1, C055 0.1, C058 0.1, C061 0.1
R047 180, R019 100 :RN, R016 1k

IC009
CLAMP & AMP

IC009 LM1201
C031 0.1, C056 0.1, C059 0.1, C062 0.1
R048 180, R020 100 :RN, R017 1k

IC010
CLAMP & AMP

IC010 LM1201
C032 0.1, C057 0.1, C060 0.1, C063 0.1
R049 180, R021 100 :RN, R018 1k, R015 10k

Q006 BUFF
R029 100, Q006 2SC3735, TP001 AΘ_R, R026 1k, C034 0.1, ΘΘ02 1SS123, CL013, R038 75, C035 0.1, R035 1k, C040 10p

Q007 BUFF
R030 100, Q007 2SC3735, TP002 AΘ_G, R027 1k, C036 0.1, ΘΘ03 1SS123, CL014, CL012, R039 75, C037 0.1, R036 1k, C041 10p

Q008 BUFF
R031 100, Q008 2SC3735, TP003 AΘ_B, R028 1k, C038 0.1, ΘΘ04 1SS123, CL015, R040 75, C039 0.1, R037 1k, C042 10p

AGNΘ, TPE001

IC005
A/D CONVERTER
IC005 CXΘ1176Q
VRTS, VRT, AVΘΘ, AVΘΘ, VIN, AVSS, AVSS, VRB, VRBS, VREF, CCP, ΘVSS, CLE, OE, ΘVSS, NC, AVΘΘ, PW, SYNC, SEL, CLK, ΘVΘΘ, ΘVΘΘ, NC
Θ7 Θ6 Θ5 Θ4 Θ3 Θ2 Θ1 Θ0
RAΘ7 RAΘ6 RAΘ5 RAΘ4 RAΘ3 RAΘ2 RAΘ1 RAΘ0
C043 0.1, C044 0.01, C045 0.01, C054 0.1, R046 33, R042 0

IC006
A/D CONVERTER
IC006 CXΘ1176Q
C046 0.01, C047 0.01, C050 0.1, C052 0.1, R044 33, R041 0
GAΘ7 GAΘ6 GAΘ5 GAΘ4 GAΘ3 GAΘ2 GAΘ1 GAΘ0

IC007
A/D CONVERTER
IC007 CXΘ1176Q
C048 0.01, C049 0.01, C051 0.1, C053 0.1, R045 33, R043 0
BAΘ7 BAΘ6 BAΘ5 BAΘ4 BAΘ3 BAΘ2 BAΘ1 BAΘ0

EXTCLK1 5L
RAΘ 3L
GAΘ 3L
BAΘ 3L
*AΘ_OE 3L
TO FMY-17 BOARD (5/6)
TO FMY-17 BOARD (3/6)

Q104,Q107
75 OHM DRAIVER
Q107 XN4601, R144 5.6, R145 5.6, R153 180, R154 120, TP103 ΘA_R, C120 0.1, C125 22 6.3V, C119 0.1, C123 22 6.3V, R148 2.2k

Q105 XN4601, R140 5.6, R141 5.6, R149 180, R150 120, C117 0.1, C122 22 6.3V, C115 0.1, C121 22 6.3V, R146 2.2k, TP101 ΘA_G, TPE101 AGNΘ

Q102 XN4601

Q102,Q105
75Ω DRAIVER

Q106 XN4601, R142 5.6, R143 5.6, R151 180, R152 120, TP102 ΘA_B, C118 0.1, C126 22 6.3V, C116 0.1, C124 22 6.3V, R147 2.2k

Q103 XN4601

Q103,Q106
75Ω DRAIVER

CN602 (2/2) TO VA-7

GNΘ	17
Θ/A_R	16
GNΘ	15
Θ/A_G	14
GNΘ	13
Θ/A_B	12
GNΘ	11

CL101, CL102, CL103, CL104
TO VA-7 BOARD CN202

HALF_TONE 4L
TO FMY-17 BOARD (4/6)

5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

IC008
CLAMP & AMP

IC005
A/D CONVERTER

IC009
CLAMP & AMP

IC010
CLAMP & AMP

IC007
A/D CONVERTER

Q006
BUFF

Q007
BUFF

Q008
BUFF

Q104,Q107
75 OHM DRAIVER

Q102,Q105
75Ω DRAIVER

Q103,Q106
75Ω DRAIVER

Q101
SW

IC101
A/D CONVERTER

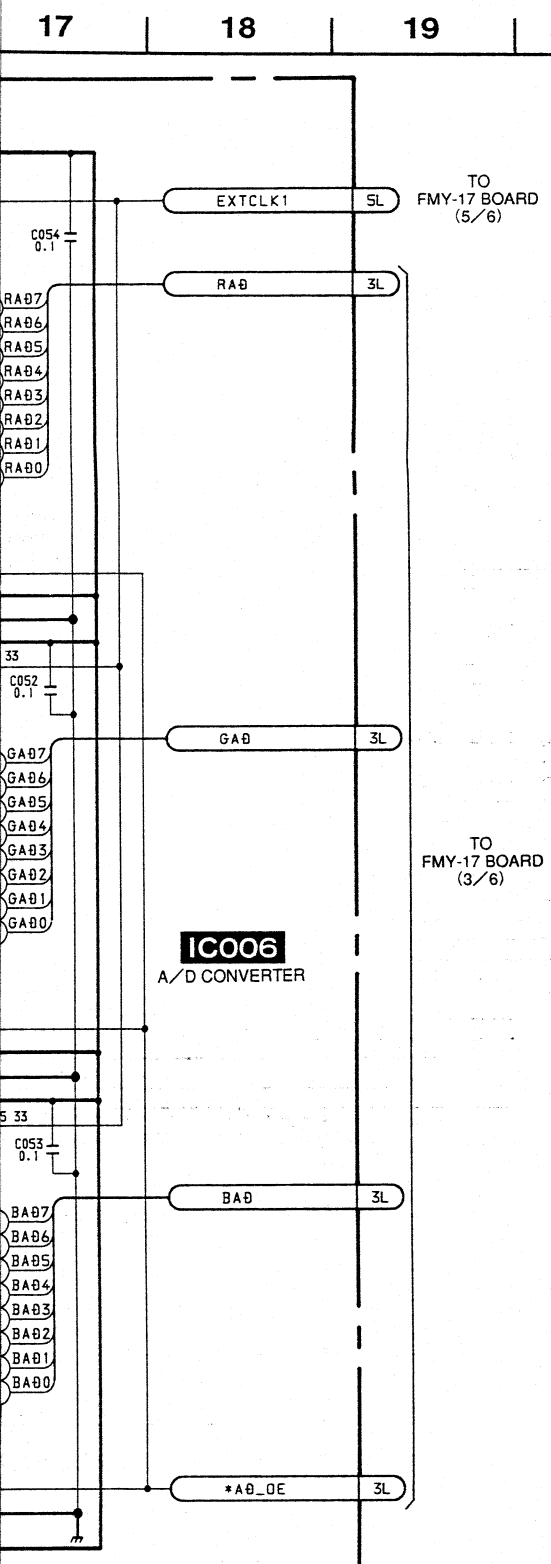
IC002
+5V REG

CN602 (2/2) TO VA-7

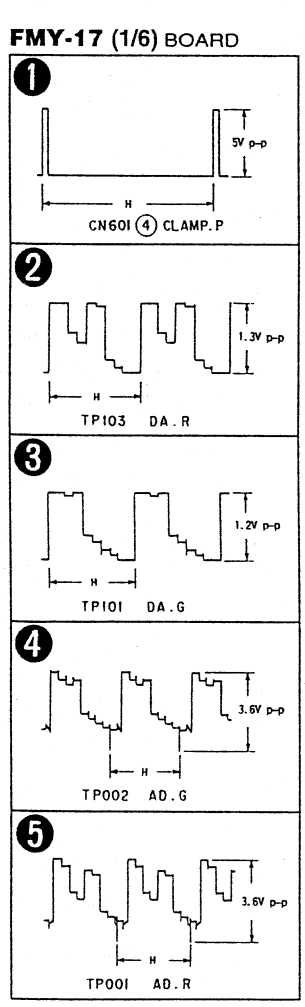
CL101	GNDA	17
	D/A_R	16
	GNDA	15
CL102	D/A_G	14
CL103	GNDA	13
CL104	D/A_B	12
	GNDA	11

TO VA-7 BOARD CN202

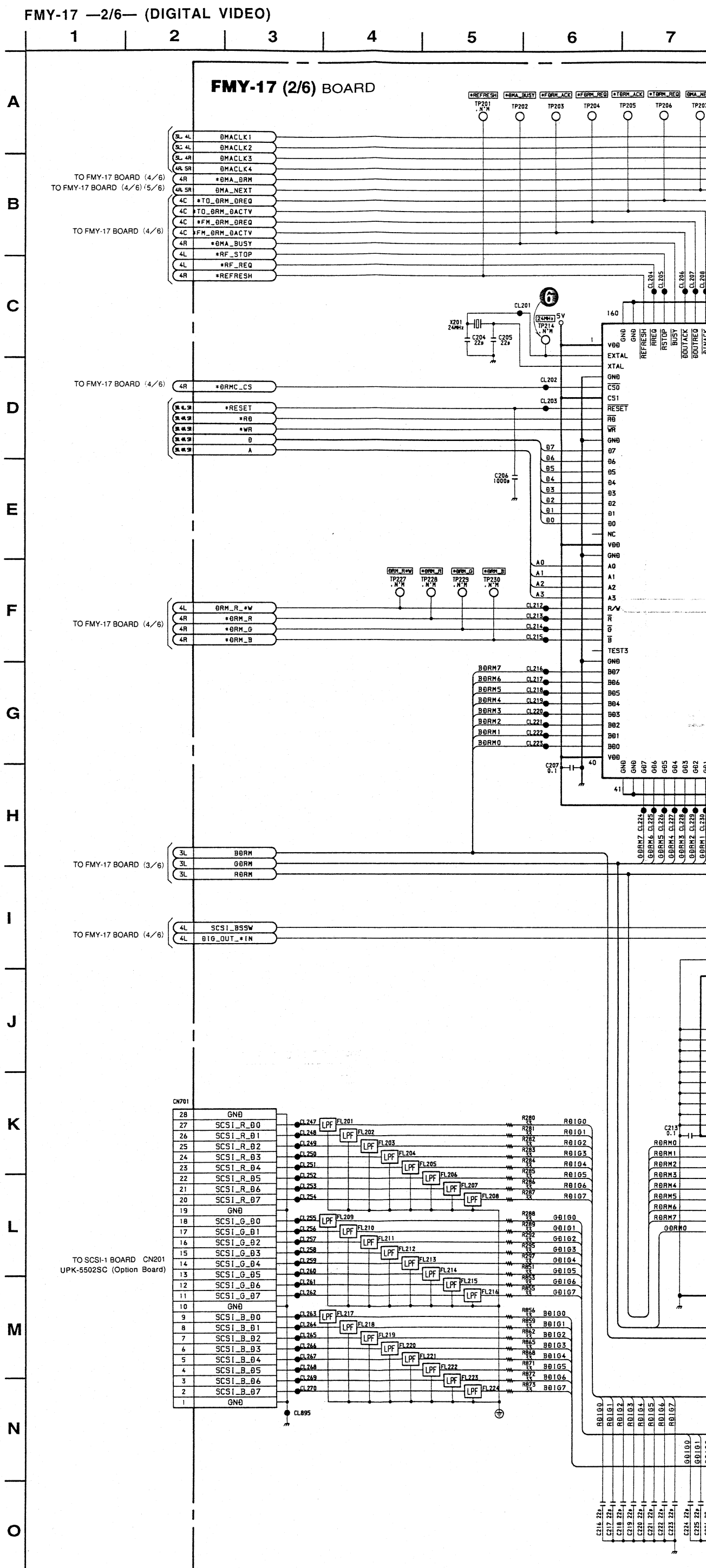
HALF_TONE 4L — TO FMY-17 BOARD (4/6)



FMY-17 (1/6) BOARD



FMY-17 —2/6— (DIGITAL VIDEO)

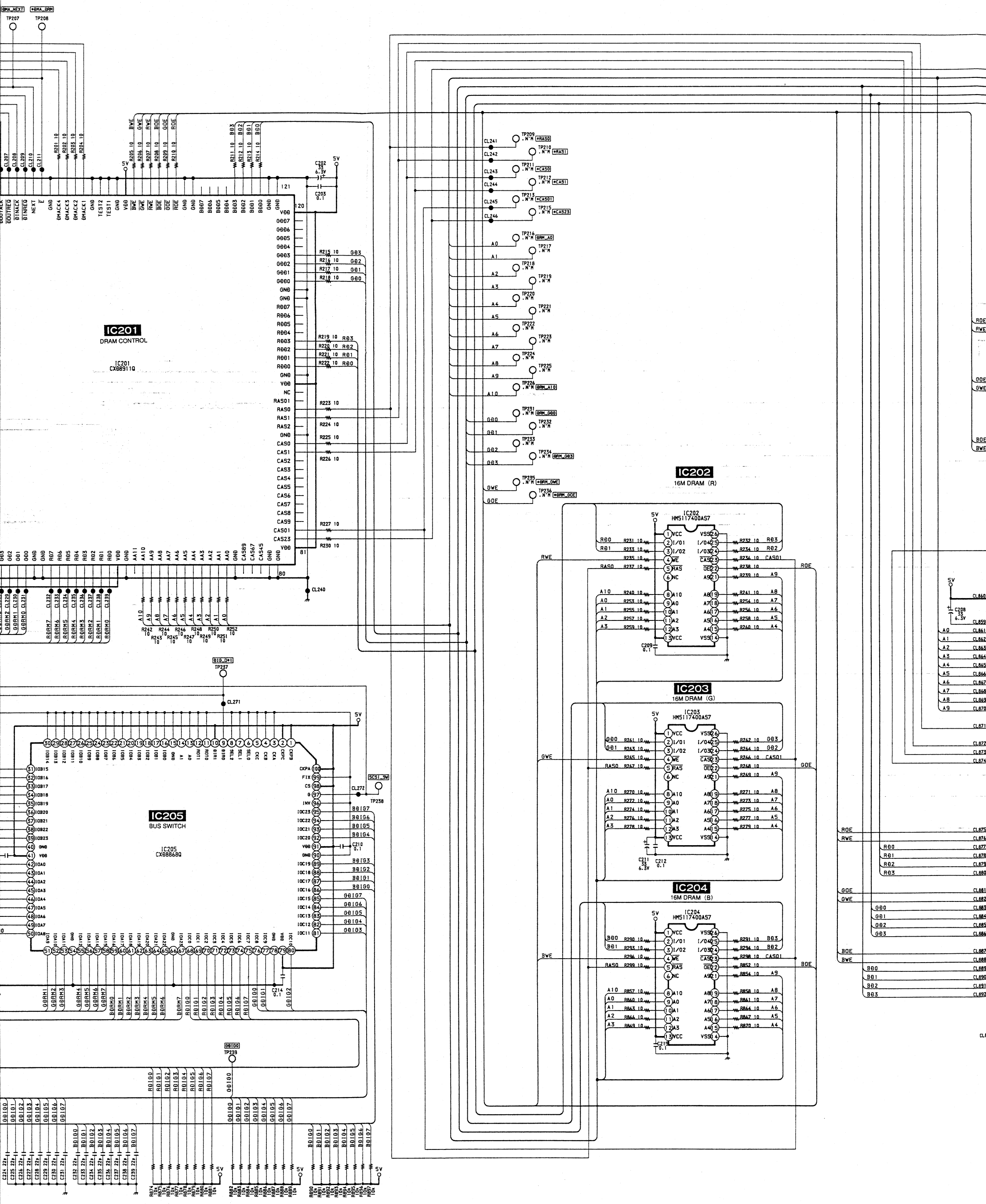


DIGITAL VIDEO

FMY-17

DIGITAL VIDEO

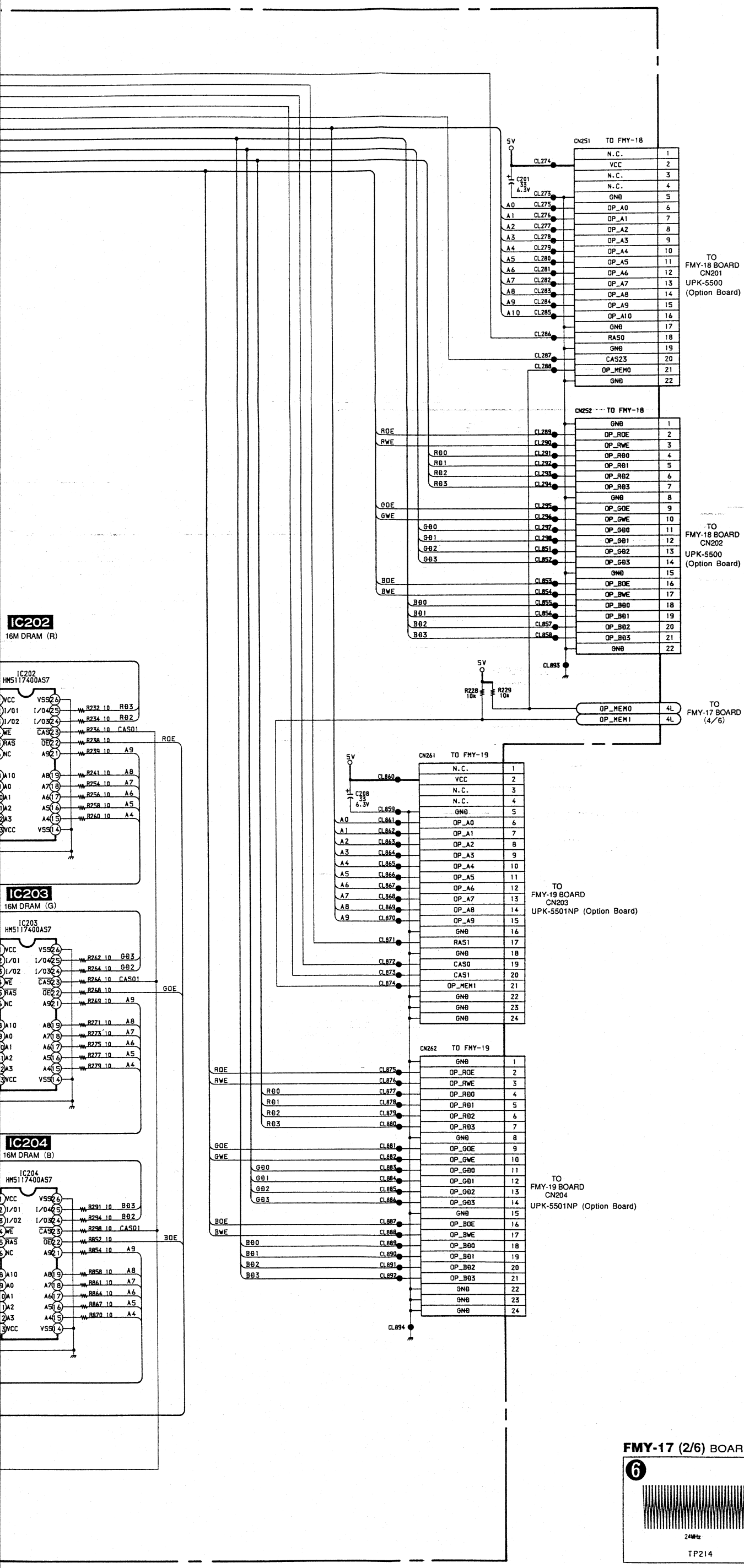
FMY-17


IC201
DRAM CONTROL
IC201
CX08911Q
IC205
BUS SWITCH
IC205
CX08868Q
IC202
16M DRAM (R)
IC202
HM5117400AS7
IC203
16M DRAM (G)
IC203
HM5117400AS7
IC204
16M DRAM (B)
IC204
HM5117400AS7
TP207
TP208
TP209 .N"M *RAS0
TP210 .N"M *RAS1
TP211 .N"M *CAS0
TP212 .N"M *CAS1
TP213 .N"M *CAS01
TP215 .N"M *CAS23
TP216 .N"M BRM_A0
TP217 .N"M
TP218 .N"M
TP219 .N"M
TP220 .N"M
TP221 .N"M
TP222 .N"M
TP223 .N"M
TP224 .N"M
TP225 .N"M
TP226 .N"M BRM_A10
TP231 .N"M BRM_G00
TP232 .N"M
TP233 .N"M
TP234 .N"M BRM_G03
TP235 .N"M *BRM_GWE
TP236 .N"M *BRM_GOE
TP237
TP238
TP239
SCSI_SW
C202 33 6.3V
C203 0.1
C240
C271
C272
C214 0.1
C209 0.1
C208 33 6.3V
C210 0.1
C211 33 6.3V
C212 0.1
C213 0.1
5V
GMA_NEXT
*GMA_BRM
BIG_D*1
B0IG0
RWE
GWE
BWE
RAS0
ROE
GOE
CKPA
FIX
CS
G
INV
SEL0
SEL1
SEL2
BIR0
BIR1
CKA
CKB
CKC
CKPB
CKPC

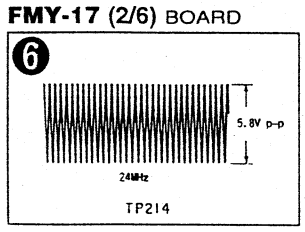
BOARD

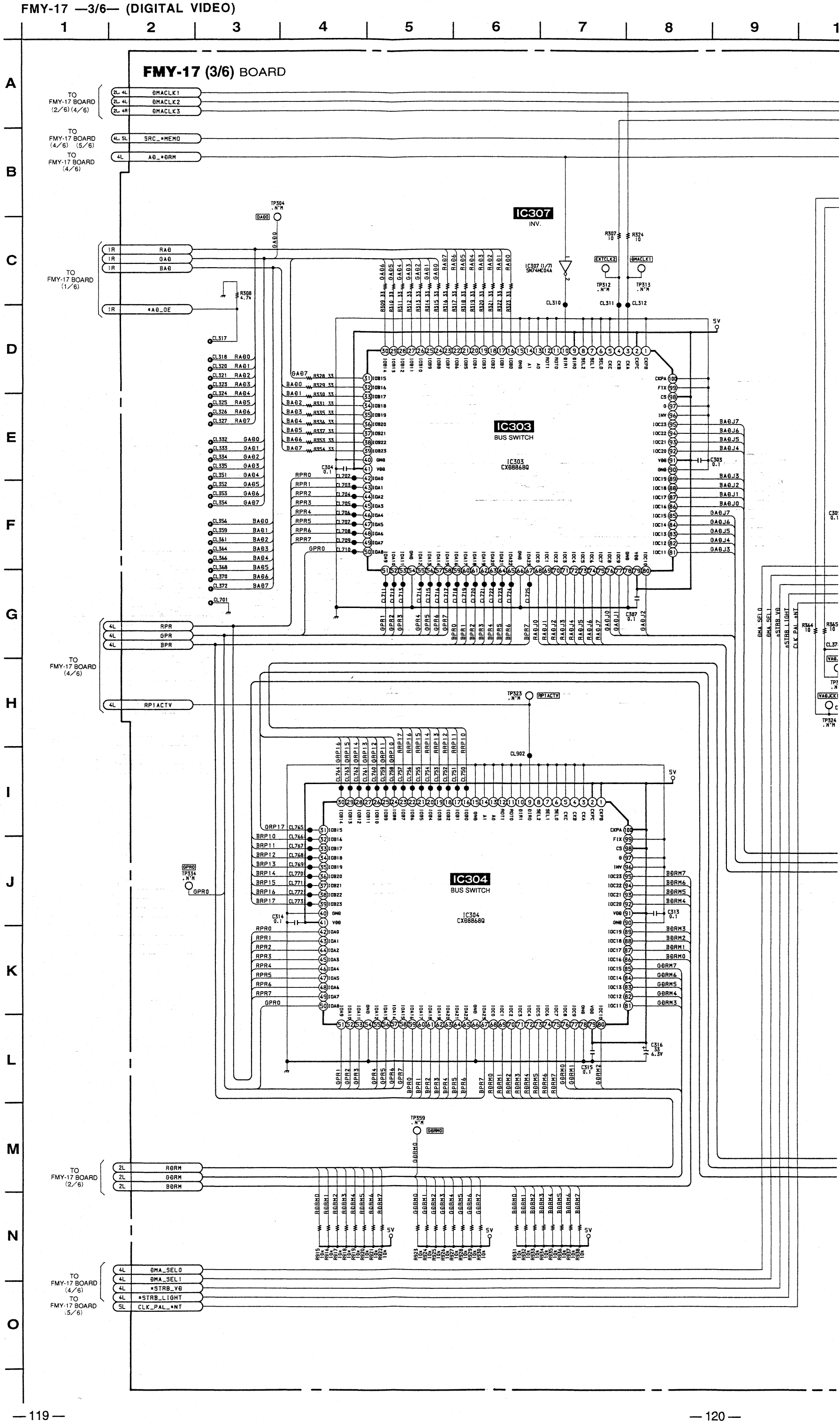
IC201
DRAM CONTROL
IC201
CX088911Q

IC205
BUS SWITCH
IC205
CX088680



FMY-17 (2/6) BOARD




FMY-17 (3/6) BOARD
TO FMY-17 BOARD (2/6)(4/6)
2L 4L ΘMACLK1
2L 4L ΘMACLK2
2L 4R ΘMACLK3
TO FMY-17 BOARD (4/6) (5/6)
4L 5L SRC_*MEMO
TO FMY-17 BOARD (4/6)
4L AΘ_*ΘRM
TO FMY-17 BOARD (1/6)
1R RAΘ
1R GAΘ
1R BAΘ
1R *AΘ_OE
TO FMY-17 BOARD (4/6)
4L RPR
4L GPR
4L BPR
4L RP1ACTV
TO FMY-17 BOARD (2/6)
2L RΘRM
2L GΘRM
2L BΘRM
TO FMY-17 BOARD (4/6)
4L ΘMA_SEL0
4L ΘMA_SEL1
4L *STRB_VΘ
4L *STRB_LIGHT
TO FMY-17 BOARD (5/6)
5L CLK_PAL_*NT
IC307
INV.
IC307 (1/7) SN74HC04A
IC303
BUS SWITCH
IC303 CXΘΘ868Q
IC304
BUS SWITCH
IC304 CXΘΘ868Q
TP304 .N*M
TP312 .N*M
TP313 .N*M
TP323 .N*M
TP324 .N*M
TP334 .N*M
TP359 .N*M
EXTCLK2
ΘMACLK1
RP1ACTV
GPR0
GΘRM0
5V
R307 10
R324 10
R308 4.7k
C303 0.1
C304 0.1
C307 0.1
C313 0.1
C314 0.1
C315 0.1
C316 33 6.3V
CL310
CL311
CL312
CL317
CL701
CL902
R364 10
R365 10

IC301
SELECTOR

IC302
SELECTOR

IC307
INV.

IC305
COLOR ADJUST

IC306
BUS SWITCH

IC306
CX88868Q

IC305
CX88869Q

IC307 (2/7)
SN74HC04A

IC307 (3/7)
SN74HC04A

IC307 (4/7)
SN74HC04A

IC307 (5/7)
SN74HC04A

IC307 (6/7)
SN74HC04A

ARD

IC307
INV.

IC307 (1/7)
SN74HC04A

IC303
BUS SWITCH

IC303
CX088680

IC304
BUS SWITCH

IC304
CX088680

IC305
COLOR ADJUST

IC305
CX088690

IC301
SELECTOR

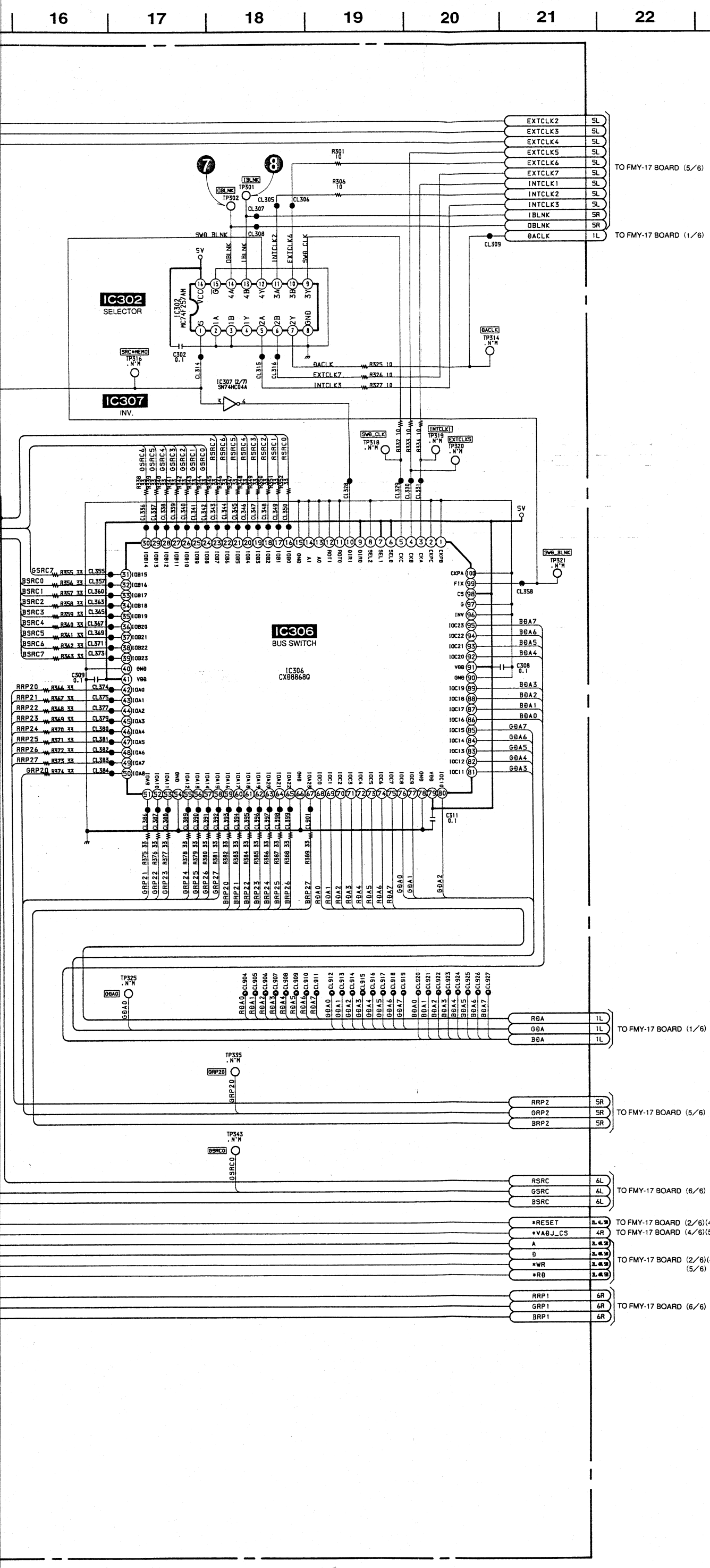
IC307 (7/7)
SN74HC04A

IC307 (3/7)
SN74HC04A

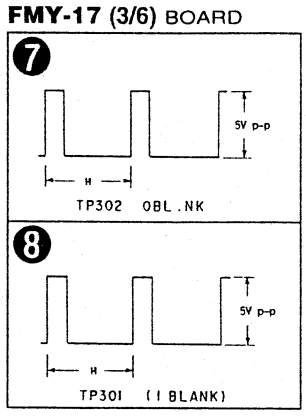
IC307 (4/7)
SN74HC04A

IC307 (5/7)
SN74HC04A

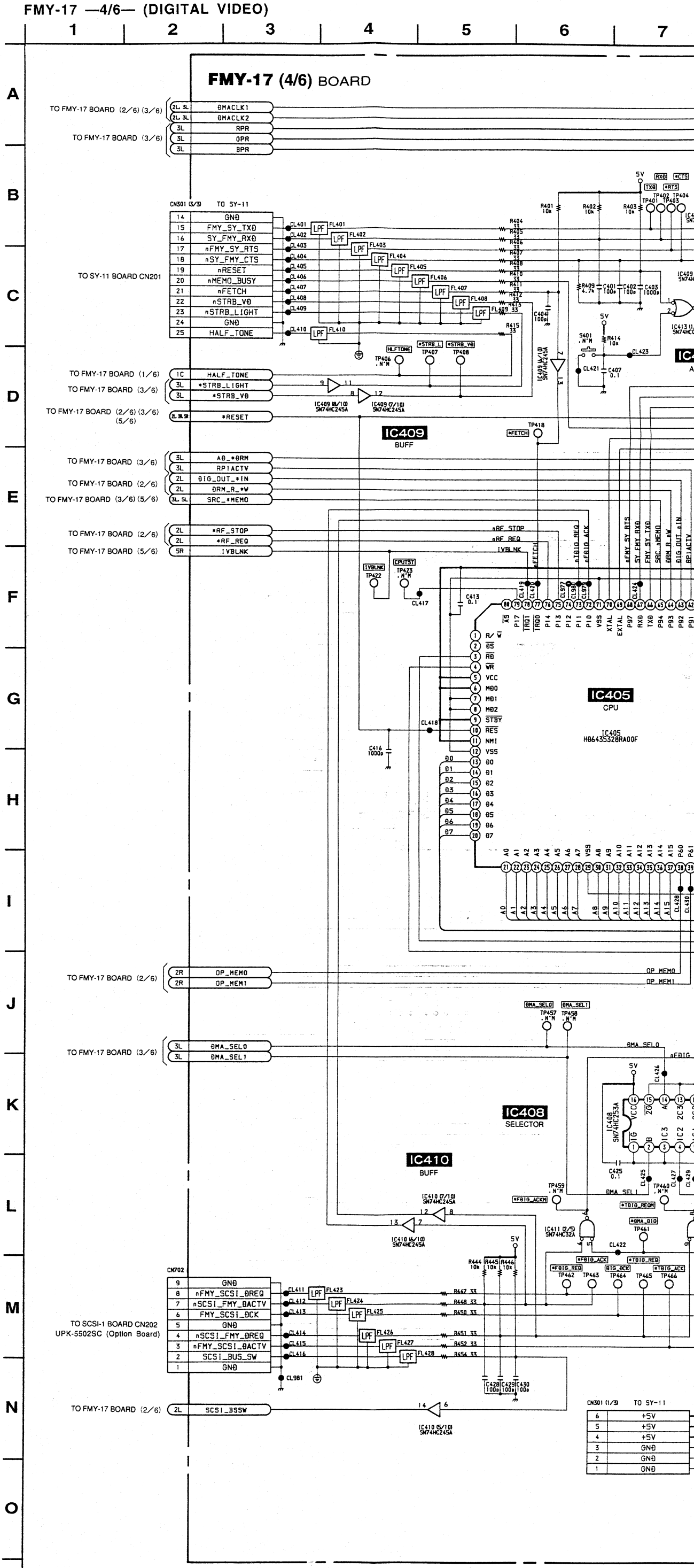
IC307 (6/7)
SN74HC04A



FMY-17 (3/6) BOARD



FMY-17 —4/6— (DIGITAL VIDEO)



DIGITAL VIDEO FMY-17

DIGITAL VIDEO FMY-17

IC409
BUFFER

IC409 (1/10) SN74HC245A
IC409 (2/10) SN74HC245A
IC409 (3/10) SN74HC245A
IC409 (4/10) SN74HC245A
IC409 (5/10) SN74HC245A
R457 10k
R458 10k
R459 10k
*CTS
TP404
*RESET
TP405
5V

IC413
AND

C413 (1/5) SN74HC08A

*M_BUSY
TP414

X401 20MHz
C410 22p
C411 22p
TP420
CL438
20MHz

BIG_OUT_nIN
BPI_ACTV
A0_nBRM

P92 P91 P90
AVCC 60 CL439
P87 59 CL440 SW1
P86 58 CL441 nREFRESH
P85 57 CL442 nAMA_BUSY
P84 56 CL443 nBRM_ACTV
P83 55 CL444 nHAC_REQ
P82 54 CL445 COLOR1
P81 53 CL446 COLOR0
AVSS 51
P77 50 nM_BUSY
P76 49 INTSET
P75 48 MVABRTMG
P74 47 nCPU_VB
FTI3 46 CL447 nINT_VB
FTI2 45 CL448 nEXT_VB
FTI1 44 CL449 nEXT_HB
P70 43 VBLNKTRG
VCC 42
P63 41 nBRM_REQ
P62 P61 P60
38 39 40
CL978
CL428 CL430
CL450
C422 0.1
C423 33 6.3V
*BRM_REQ
TP429
*BRM_ACK
TP456

nSY_FMY_CTS

IC404
COLOR ADJUST

IC404
CX08869Q

SUB27 SUB26 SUB25 SUB24 SUB23 SUB22 SUB21 SUB20
SUB17 SUB16 SUB15 SUB14 SUB13 SUB12
SUB11 SUB10
MAIN7 MAIN6 MAIN5 MAIN4 MAIN3 MAIN2 MAIN1 MAIN0

C408 0.1
C409 33 6.3V

80 OUTB7 79 OUTB6 78 OUTB5 77 OUTB4 76 OUTB3 75 OUTB2 74 OUTB1 73 GND
72 OUTB0 71 OUTG7 70 OUTG6 69 OUTG5 68 OUTG4 67 OUTG3 66 OUTG2 65 GND
64 OUTG1 63 OUTG0 62 OUTR7 61 OUTR6 60 OUTR5 59 OUTR4 58 GND
57 OUTR3 56 OUTR2 55 OUTR1 54 OUTR0 53 CS4 52 CS3 51 CS2

81 REV
82 V00
83 P50 nBRM_R
84 P51 nBRM_G
85 P52 nBRM_B
86 P53 CG_ON_nOFF
87 P54 AMA_NEXT
88 P55 nAMA_BIG
89 P56 nAMA_BRM
90 P57 nAMA_VRM
CL453
91 V00
92 CLK2
93 TEST
94 Y6
95 Y7
96 BE0
97 BE1
98 BE2
CL454
99 CLK1
100 OE

R417 10
TP421
@MACLK2
TP424
@MACLK1
R418 10

INB7 INB6 INB5 INB4 INB3 INB2 INB1 INB0
ING7 ING6 ING5 ING4 ING3 ING2 GND ING1 ING0
INR7 INR6 INR5 INR4 INR3 INR2 INR1 INR0
RD WR D7 D6 D5

1 INB7 2 INB6 3 INB5 4 INB4 5 INB3 6 INB2 7 INB1 8 INB0 9 ING7 10 ING6 11 ING5 12 ING4 13 ING3 14 ING2 15 GND 16 ING1 17 ING0 18 INR7 19 INR6 20 INR5 21 INR4 22 INR3 23 INR2 24 INR1 25 INR0 26 RD 27 WR 28 D7 29 D6 30 D5

BPR7 BPR6 BPR5 BPR4 BPR3 BPR2 BPR1 BPR0
GPR7 GPR6 GPR5 GPR4 GPR3 GPR2 GPR1 GPR0
RPR7 RPR6 RPR5 RPR4 RPR3 RPR2 RPR1 RPR0

50 CS1 A10 49 A9 48 A8 47 A7 46 A6 45 A5 44 A4 43 A3 42 V00 41 RES 40 V00 39 A2 38 A1 37 A0 36 B0 35 B1 34 B2 33 B3 32 B4 31

CL457 A10 A9 A8 A7 A6 A5 A4 A3
CL458 A2 A1 A0 B0 B1 B2 B3 B4
C412 1000p
C415 0.1

IC401
MASKING MAIN ROM

IC401
MX23C8000-MM

5V
C405 0.1
CL497
COLOR1 CL467 A19
SUB17 A16
SUB7 A15
SUB4 A12
MAIN7 CL468 A7
MAIN6 CL469 A6
MAIN5 CL470 A5
MAIN4 CL471 A4
MAIN3 CL472 A3
MAIN2 CL473 A2
MAIN1 CL474 A1
MAIN0 CL475 A0
B0 B1 B2 B3 B4 B5 B6 B7
VCC VSS
A18 A17 A14 A13 A8 A9 A11 OE A10 CE

COLOR0 SUB27 SUB6 SUB5 SUB0 SUB1 SUB3 SUB2

IC402
MASKING SUB ROM

IC402
MX23C2000-MS

C414 0.1
COLOR0 CL476 A16
SUB27 CL477 A15
SUB24 CL478 A12
SUB17 CL479 A7
SUB16 CL480 A6
SUB15 CL481 A5
SUB14 CL482 A4
SUB13 CL483 A3
SUB12 CL484 A2
SUB11 CL485 A1
SUB10 CL486 A0
SUB0 B0
SUB1 B1
SUB2 B2
VPP PGM A17 A14 A13 A8 A9 A11 OE A10 CE B7 B6 B5 B4 B3
CL498 CL499 CL951 CL952 CL953 CL954 CL955
COLOR1 SUB26 SUB25 SUB20 SUB21 SUB23 SUB22 SUB7 SUB6 SUB5 SUB4 SUB3

IC410
BUFFER

IC410 (2/10) SN74HC245A
IC410 (5/10) SN74HC245A

IC406
PROGRAM ROM

CN1406
IC406
MX27C512-FMY17*
C420 0.1
A15 A12 A7 A6 A5 A4 A3 A2 A1 A0 B0 B1 B2 GND
VCC A14 A13 A8 A9 A11 OE A10 CE B7 B6 B5 B4 B3

IC413
AND

IC413 (2/5) SN74HC08A
A11 A12 A13 A14 A15

IC407
DECODER

IC407
SN74HC138A
C421 0.1
A B C G2A G2B G1 Y7 GND
VCC Y0 Y1 Y2 Y3 Y4 Y5 Y6

5V R435 10k S402 CL455 CL456 C424 0.1

TP426
*PRNT_BREQ

A0 A15 B0 B7
CL458 CL459 CL460 CL461 CL462 CL463 CL464 CL465 CL466 CL487 CL488 CL489 CL490 CL491 CL492 CL493 CL494 CL495 CL496 CL956 CL957 CL958 CL959 CL960 CL961
A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 B0 B1 B2 B3 B4 B5 B6 B7

R430 10k R437 10k R438 10k R439 10k R440 10k R441 10k R442 10k R443 10k
B0 B1 B2 B3 B4 B5 B6 B7

nEBIG_ACKM nEVRM_ACK nTBRM_ACK
CL431
1C3 1C2 1C1 1C0 1Y GND
4 5 6 7 8
CL427 CL429
nBRM_REQ nFBRM_REQ nTVRM_REQ

IC411 (5/5) SN74HC32A
IC411 (1/5) SN74HC32A
IC412 (1/5) SN74HC32A
IC411 (4/5) SN74HC32A
CL451
R449 10

*TO_BRM_BREQ 2L
*TO_BRM_BACTV 2L
*FM_BRM_BREQ 2L
*FM_BRM_BACTV 2L
TO FMY-17 BOARD (2/6)

*FM_VRM_BREQ 5R
*FM_VRM_BACTV 5R
*TO_VRM_BREQ 5R
*TO_VRM_BACTV 5R
TO FMY-17 BOARD (5/6)

IC411
OR

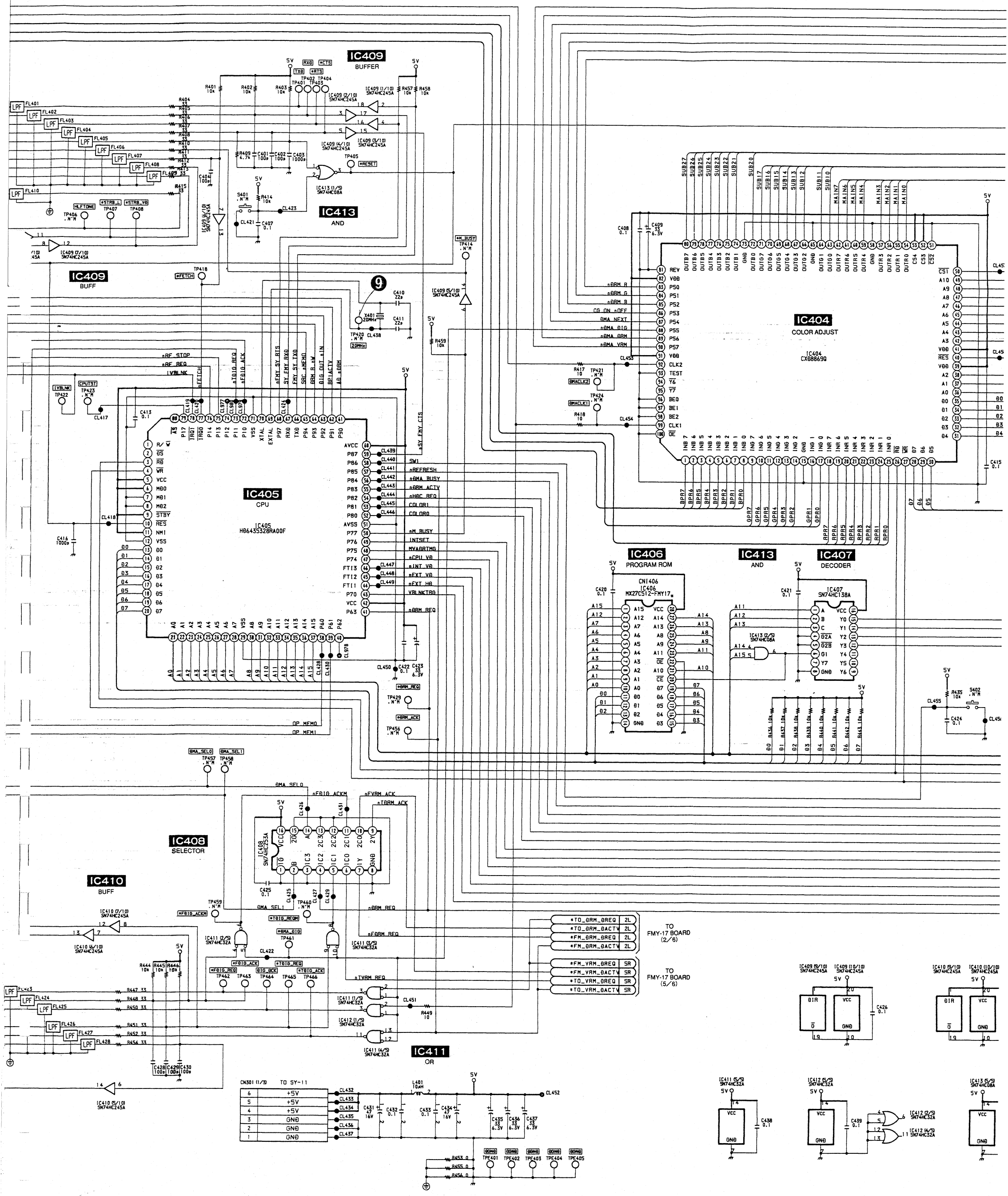
L401 10mH
CL432 CL433 CL434 CL435 CL436 CL437 CL452
C431 47 16V
C432 0.1
C433 0.1
C434 47 16V
C435 33 6.3V
C436 33 6.3V
C437 33 6.3V
R453 0 R455 0 R456 0
BGND TPE401 TPE402 TPE403 TPE404 TPE405

IC409 (6/10) SN74HC245A
IC409 (10/10) SN74HC245A
DIR G VCC GND
C426 0.1

IC410 (6/10) SN74HC245A
IC410 (10/10) SN74HC245A
C427 0.1
IC410 (1/10) SN74HC245A
IC410 (8/10) SN74HC245A

IC411 (5/5) SN74HC32A
C438 0.1
IC412 (5/5) SN74HC32A
C439 0.1
IC412 (2/5) SN74HC32A
IC412 (4/5) SN74HC32A
IC413 (5/5) SN74HC08A
C440 0.1
IC413 (3/5) SN74HC08A
IC413 (4/5) SN74HC08A

BOARD


IC409
BUFFER
IC413
AND
IC409
BUFF
IC405
CPU
IC405
H06435328RA00F
IC404
COLOR ADJUST
IC404
CX98869Q
IC406
PROGRAM ROM
CN1406
IC406
MX27C512-FMY17*
IC413
AND
IC407
DECODER
IC407
SN74HC138A
IC408
SELECTOR
IC410
BUFF
IC411
OR
X401
20MHz
TO
FMY-17 BOARD
(2/6)
TO
FMY-17 BOARD
(5/6)
CN301 (1/3) TO SY-11
+5V
+5V
+5V
GND
GND
GND

*BMA_VRM SR — TO FMY-17 BOARD (5/6)
*BMA_BRM 2L — TO FMY-17 BOARD (2/6)
BMA_NEXT 2L SR — TO FMY-17 BOARD (2/6) (5/6)
CG_ON_*OFF 5L — TO FMY-17 BOARD (5/6)
*BRM_B 2L
*BRM_G 2L — TO FMY-17 BOARD (2/6)
*BRM_R 2L

IC401
MASKING MAIN ROM

IC401 MX23C8000-MM
C405 0.1
5V
CL497
COLOR1 CL467
SUB17
SUB7
SUB4
MAIN7 CL468
MAIN6 CL469
MAIN5 CL470
MAIN4 CL471
MAIN3 CL472
MAIN2 CL473
MAIN1 CL474
MAIN0 CL475
COLOR0
SUB27
SUB6
SUB5
SUB0
SUB1
SUB3
SUB2

MAIN7 MAIN6 MAIN5 MAIN4 MAIN3 MAIN2 MAIN1 MAIN0
SL401 SL402 SL403 SL404 SL405 SL406 SL407 SL408

IC403
D-FF

C406 0.1
5V
IC403 SN74HC574A
PR00 PR01 PR02 PR03 PR04 PR05 PR06 PR07
TP409 PR00 TP410 TP411 TP412 TP413 TP415 TP416 TP417 PR07
CL964
BMACLK3
TP419
R416 10
BMACLK3 2L 3L — TO FMY-17 BOARD (2/6) (3/6)

CL457 A10 A9 A8 A7 A6 A5 A4 A3
CL458 A2 A1 A0
C412 1000p
B0 B1 B2 B3 B4
C415 0.1

IC402
MASKING SUB ROM

IC402 MX23C2000-MS
C414 0.1
5V
COLOR0 CL476
SUB27 CL477
SUB24 CL478
SUB17 CL479
SUB16 CL480
SUB15 CL481
SUB14 CL482
SUB13 CL483
SUB12 CL484
SUB11 CL485
SUB10 CL486
SUB0
SUB1
SUB2
CL498 CL499 CL951 CL952 CL953 CL954 CL955
COLOR1
SUB26
SUB25
SUB20
SUB21
SUB23
SUB22
SUB7
SUB6
SUB5
SUB4
SUB3

R419 33 PR00 — LPF FL411
R420 33 PR01 — LPF FL412
R421 33 PR02 — LPF FL413
R422 33 PR03 — LPF FL414
R423 33 PR04 — LPF FL415
R424 33 PR05 — LPF FL416
R425 33 PR06 — LPF FL417
R426 33 PR07 — LPF FL418
5V
R430 33 — LPF FL419
R431 33 — LPF FL420
R432 33 — LPF FL421
R433 33 — LPF FL422
R427 10k R428 10k R429 10k
C417 0.1 C418 0.1 C419 0.1
CL965 CL966 CL967 CL968 CL982

CN951

CL969	PRNT_B0	1
CL970	PRNT_B1	2
CL971	PRNT_B2	3
CL972	PRNT_B3	4
CL973	PRNT_B4	5
CL974	PRNT_B5	6
CL975	PRNT_B6	7
CL976	PRNT_B7	8
	GNB	9
	PRNT_BCK	10
	nPRNT_BREQ	11
	GNB	12
	COLOR0	13
	COLOR1	14

TO SE-44 BOARD CN201

R434 10
TP425
PRNT_BCK
IC412 (5/5) SN74HC32A

IC410
BUFFER
IC410 (2/10) SN74HC245A
IC410 (3/10) SN74HC245A
IC410 (4/10) SN74HC245A

IC412
OR

BMACLK4 2L SR — TO FMY-17 BOARD (2/6)(5/6)
*VA0J_CS 3R — TO FMY-17 BOARD (3/6)
*VRMC_CS 5R — TO FMY-17 BOARD (5/6)
*BRMC_CS 2L — TO FMY-17 BOARD (2/6)

TP426 *PRNT_BREQ
TP427 COL0
TP428 COL1
TP454 *RB
TP455 *WR
CL962 CL963

A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15
CL459 CL460 CL461 CL462 CL463 CL464 CL465 CL466 CL467 CL468 CL469 CL470 CL471 CL472 CL473 CL474
B0 B1 B2 B3 B4 B5 B6 B7
CL495 CL496 CL956 CL957 CL958 CL959 CL960 CL961
CL456

A — 2L 3L
B — 2L 3L
*RB — 2L 3L
*WR — 2L 3L
TO FMY-17 BOARD (2/6)(3/6) (5/6)

*REFRESH 2L
*BMA_BUSY 2L
TO FMY-17 BOARD (2/6)

INTSET SR
MVA0RTMG SR
*CPU_V0 SR
*INT_V0 SL
*EXT_V0 SL
*EXT_H0 SL
VBLNKTRG SR
TO FMY-17 BOARD (5/6)

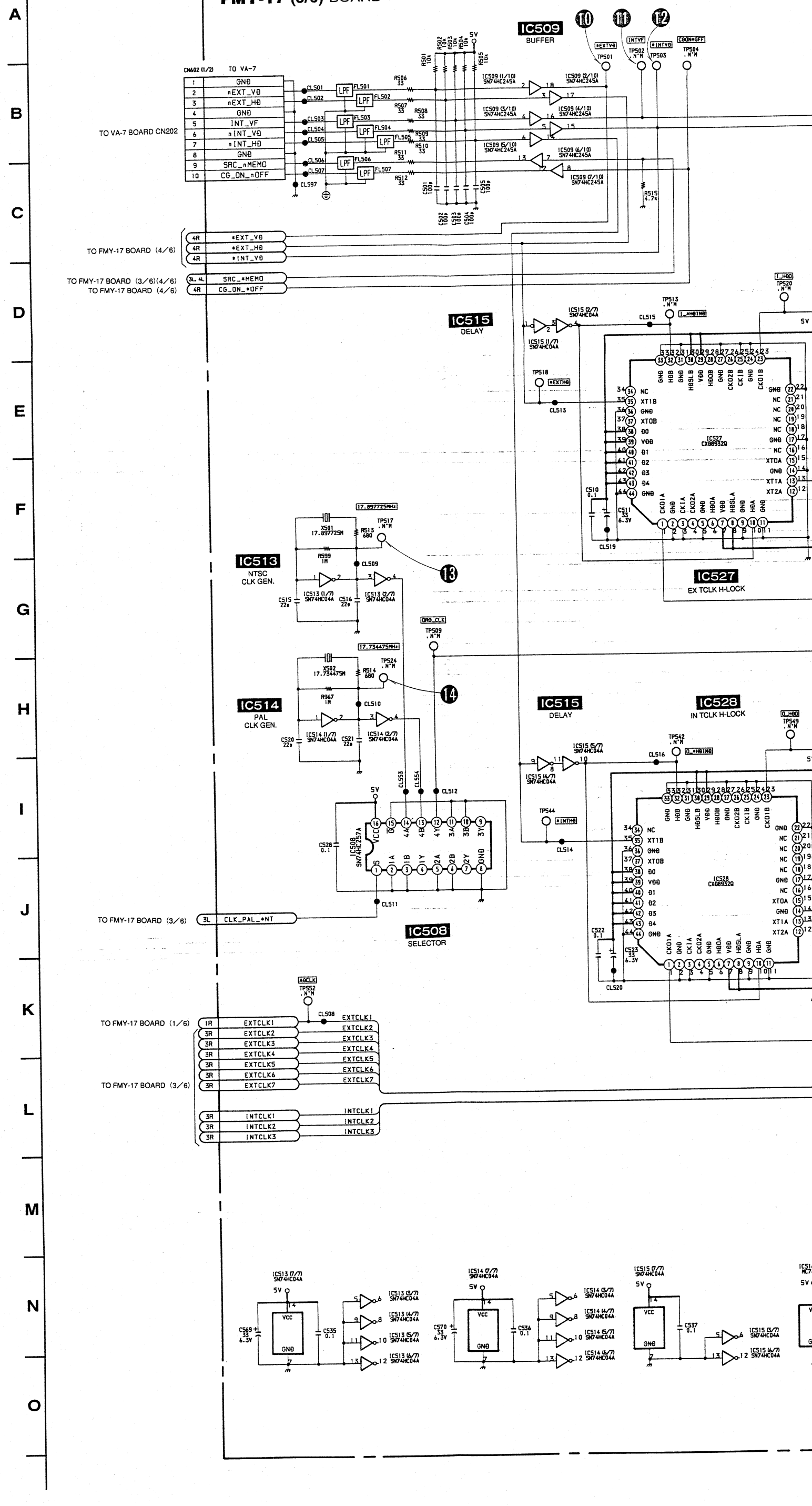
IC410 (1/10) SN74HC245A
C427 0.1
IC410 (6/10) SN74HC245A

IC413 (3/5) SN74HC08A
C440 0.1
IC413 (4/5) SN74HC08A

FMY-17 (4/6) BOARD

9
4V p-p
20MHz
TP420 NM

FMY-17 (5/6) BOARD



IC523 IC524 IC516
IC517 IC519 IC520
CLOCK MASK

IC504
DELAY LINE

IC553
BUFFER

IC501
VRAM CONTROL

IC527
EX TCLK H-LOCK

IC525 IC526 IC566
IC518 IC521 IC522
CLOCK MASK

IC528
IN TCLK H-LOCK

IC507
DELAY LINE

IC511
BUFFER

i/6) BOARD

IC509 BUFFER

IC523 IC524 IC516 IC517 IC519 IC520 CLOCK MASK

IC504 DELAY LINE

IC553 BUFFER

IC515 DELAY

IC527 EX TCLK H-LOCK

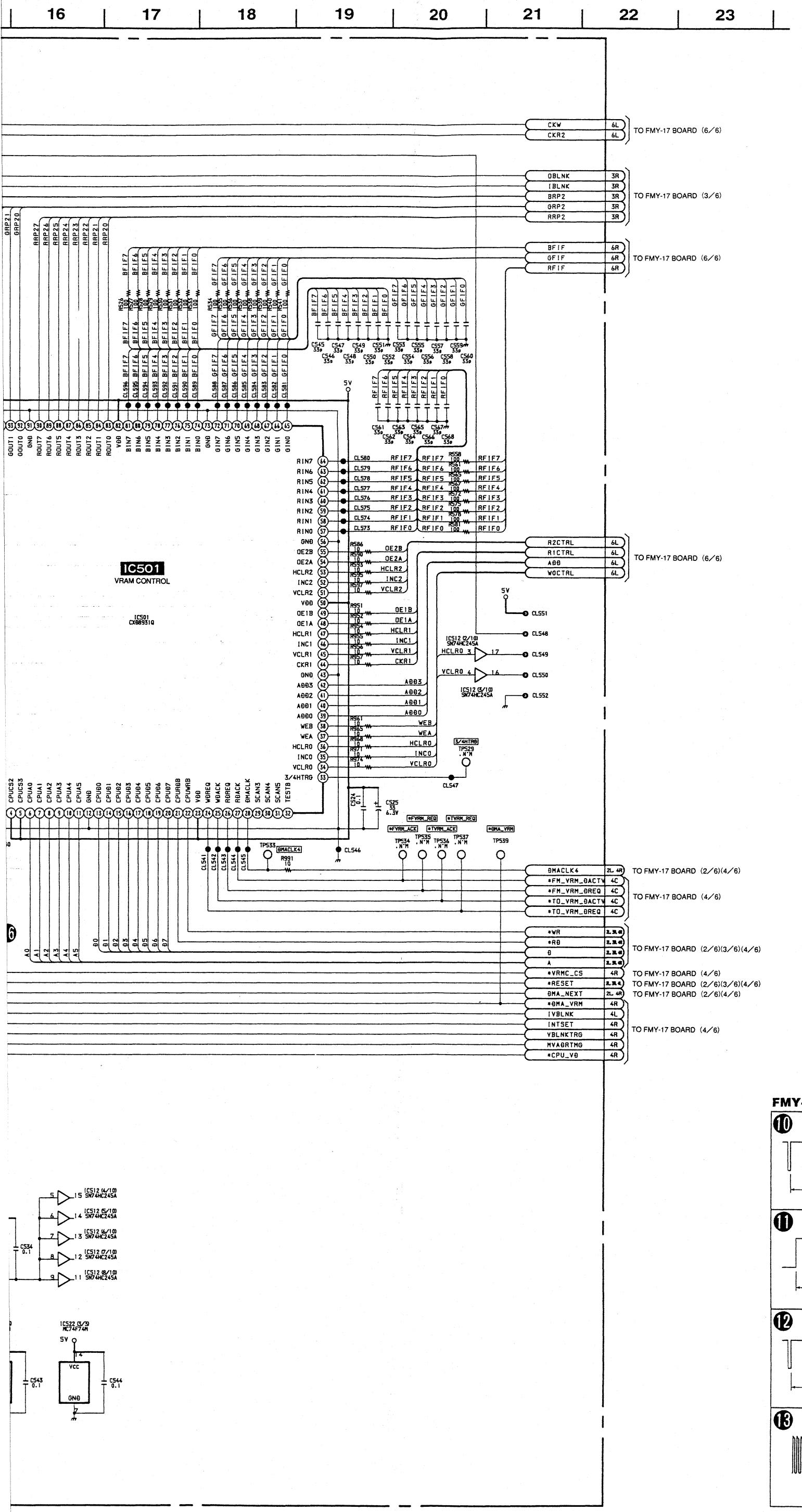
IC525 IC526 IC566 IC518 IC521 IC522 CLOCK MASK

IC528 IN TCLK H-LOCK

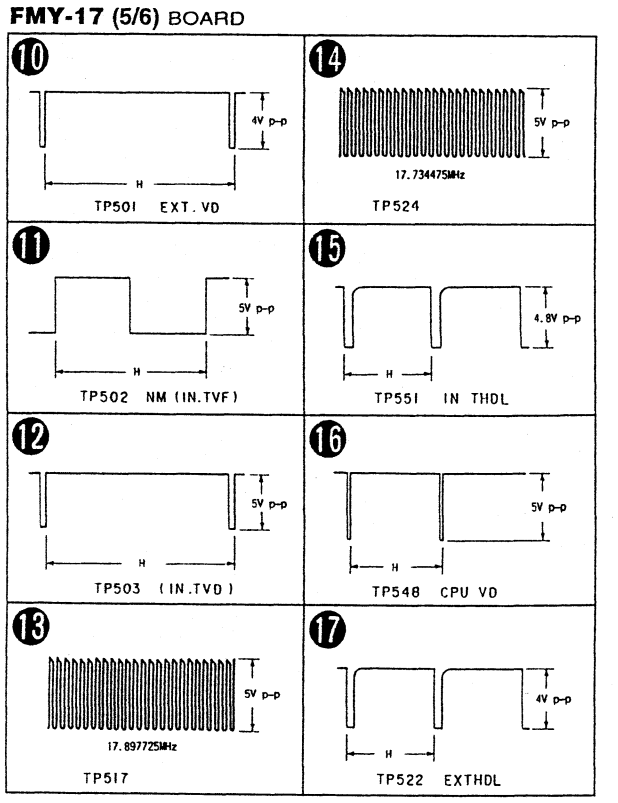
IC507 DELAY LINE

IC511 BUFFER

IC508 SELECTOR



FMY-17 (5/6) BOARD



1 2 3 4 5 6 7 8 9 10 11

A B D E F G H I J K L M N O

3R RSRC

3R GSRC

3R BSRC

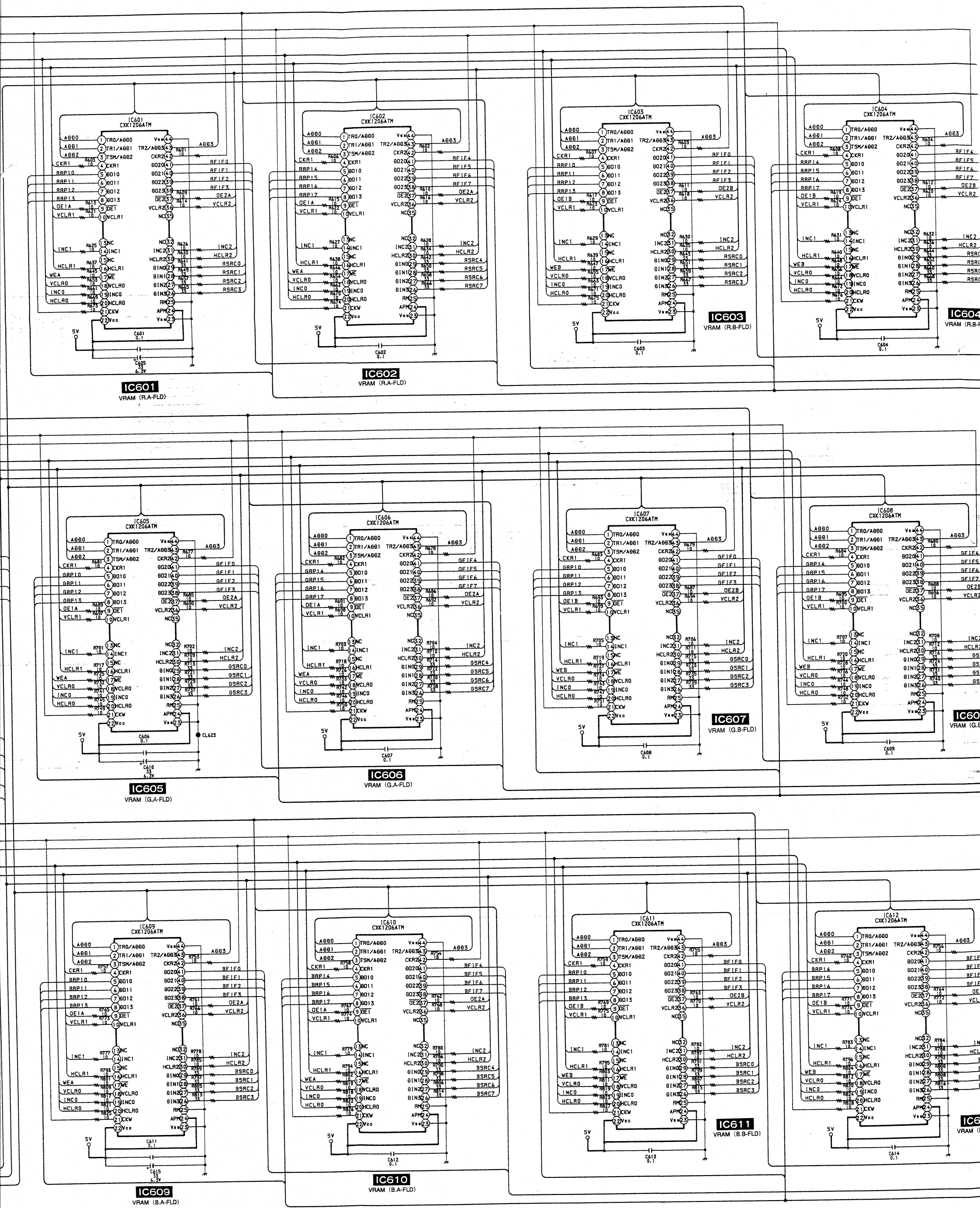
TO FMY-17 BOARD (3/6)

TO FMY-17 BOARD (5/6)

5R CKW
5R CKR2
5R WOCTRL
5R R1CTRL
5R R2CTRL
5R A00

CKW TP601 CL601
VCLR0 TP602 CL602 VCLR0
INC0 TP603 CL603 INC0
HCLR0 TP604 CL604 HCLR0
*WEA TP605 CL605 WEA
*WEB TP606 CL606 WEB
A000 TP607 CL607 A000
TP608 CL608 A001
TP609 CL609 A002
A003 TP610 CL610 A003
CKR1 TP611 CL611 CKR1
VCLR1 TP612 CL612 VCLR1
INC1 TP613 CL613 INC1
HCLR1 TP614 CL614 HCLR1
*OE1A TP615 CL615 OE1A
*OE1B TP616 CL616 OE1B
CKR2 TP617 CL617
VCLR2 TP618 CL618 VCLR2
INC2 TP619 CL619 INC2
HCLR2 TP628 CL620 HCLR2
*OE2A TP629 CL621 OE2A
*OE2B TP630 CL622 OE2B

IC601 CXK1206ATM — VRAM (R.A-FLD)
IC602 CXK1206ATM — VRAM (R.A-FLD)
IC603 CXK1206ATM
IC605 CXK1206ATM — VRAM (G.A-FLD)
IC606 CXK1206ATM — VRAM (G.A-FLD)
IC607 CXK1206ATM
IC609 CXK1206ATM — VRAM (B.A-FLD)
IC610 CXK1206ATM — VRAM (B.A-FLD)
IC611 CXK1206ATM


IC601 CXK1206ATM
IC601
VRAM (R.A-FLD)
IC602 CXK1206ATM
IC602
VRAM (R.A-FLD)
IC603 CXK1206ATM
IC603
VRAM (R.B-FLD)
IC604 CXK1206ATM
IC604
VRAM (R.B-FLD)
IC605 CXK1206ATM
IC605
VRAM (G.A-FLD)
IC606 CXK1206ATM
IC606
VRAM (G.A-FLD)
IC607 CXK1206ATM
IC607
VRAM (G.B-FLD)
IC608 CXK1206ATM
IC609 CXK1206ATM
IC609
VRAM (B.A-FLD)
IC610 CXK1206ATM
IC610
VRAM (B.A-FLD)
IC611 CXK1206ATM
IC611
VRAM (B.B-FLD)
IC612 CXK1206ATM
5V
A000
A001
A002
A003
CKR1
RRP10
RRP11
RRP12
RRP13
OE1A
VCLR1
INC1
HCLR1
WEA
VCLR0
INC0
HCLR0
RFIE0
RFIE1
RFIE2
RFIE3
OE2A
VCLR2
INC2
HCLR2
RSRC0
RSRC1
RSRC2
RSRC3
RRP14
RRP15
RRP16
RRP17
OE1B
WEB
RFIE4
RFIE5
RFIE6
RFIE7
OE2B
GSRC0
GSRC1
GSRC2
GSRC3
GSRC4
GSRC5
GSRC6
GSRC7
BSRC0
BSRC1
BSRC2
BSRC3
BSRC4
BSRC5
BSRC6
BSRC7
CL623

1 2 3 4 5 6 7 8 9 10 11

A B C D E F G H I J K L M N O

3R RSRC

IC601 CXK1206ATM

A000 A001 A002 A003

TR0/A000 TR1/A001 TR2/A003 TSM/A002 CKR1 CKR2 ØO20 ØO21 ØO22 ØO23 ØE2 VCLR2 NC

RF1F0 RF1F1 RF1F2 RF1F3 OE2A VCLR2

RRP10 RRP11 RRP12 RRP13 ØO10 ØO11 ØO12 ØO13 OE1A OE1 VCLR1 VCLR1

INC1 INC1 INC2 INC2 HCLR1 HCLR1 HCLR2 HCLR2 WEA WE VCLR0 VCLR0 INC0 INC0 HCLR0 HCLR0 ØIN0 ØIN1 ØIN2 ØIN3 RSRC0 RSRC1 RSRC2 RSRC3

RM APM Vss Vcc CKW

5V C601 0.1 C605 33 6.3V

IC601 VRAM (R.A-FLD)

IC602 CXK1206ATM

RF1F4 RF1F5 RF1F6 RF1F7 RRP14 RRP15 RRP16 RRP17 RSRC4 RSRC5 RSRC6 RSRC7

5V C602 0.1

IC602 VRAM (R.A-FLD)

IC603 CXK1206ATM

5V C603 0.1

3R GSRC

CKW VCLR0 INC0 HCLR0 WEA WEB A000 A001 A002 A003 CKR1 VCLR1 INC1 HCLR1 OE1A OE1B CKR2 VCLR2 INC2 HCLR2 OE2A OE2B

TO FMY-17 BOARD (3/6)

IC605 CXK1206ATM

GRP10 GRP11 GRP12 GRP13 GRP14 GRP15 GRP16 GRP17 GSRC0 GSRC1 GSRC2 GSRC3 GSRC4 GSRC5 GSRC6 GSRC7 BF1F0 BF1F1 BF1F2 BF1F3 BF1F4 BF1F5 BF1F6 BF1F7 BSRC0 BSRC1 BSRC2 BSRC3 BSRC4 BSRC5 BSRC6 BSRC7

CL623

5V C606 0.1 C610 33 6.3V

IC605 VRAM (G.A-FLD)

IC606 CXK1206ATM

5V C607 0.1

IC606 VRAM (G.A-FLD)

IC607 CXK1206ATM

5V C608 0.1

3R BSRC

IC609 CXK1206ATM

5V C611 0.1 C615 33 6.3V

IC609 VRAM (B.A-FLD)

IC610 CXK1206ATM

5V C612 0.1

IC610 VRAM (B.A-FLD)

IC611 CXK1206ATM

5V C613 0.1

5R CKW 5R CKR2 5R WOCTRL 5R R1CTRL 5R R2CTRL 5R A00

TO FMY-17 BOARD (5/6)

FMY-17 (6/6) BOARD

IC603 CXK1206ATM

IC603 VRAM (R.B-FLD)

IC604 CXK1206ATM

IC604 VRAM (R.B-FLD)

IC607 CXK1206ATM

IC607 VRAM (G.B-FLD)

IC608 CXK1206ATM

IC608 VRAM (G.B-FLD)

IC611 CXK1206ATM

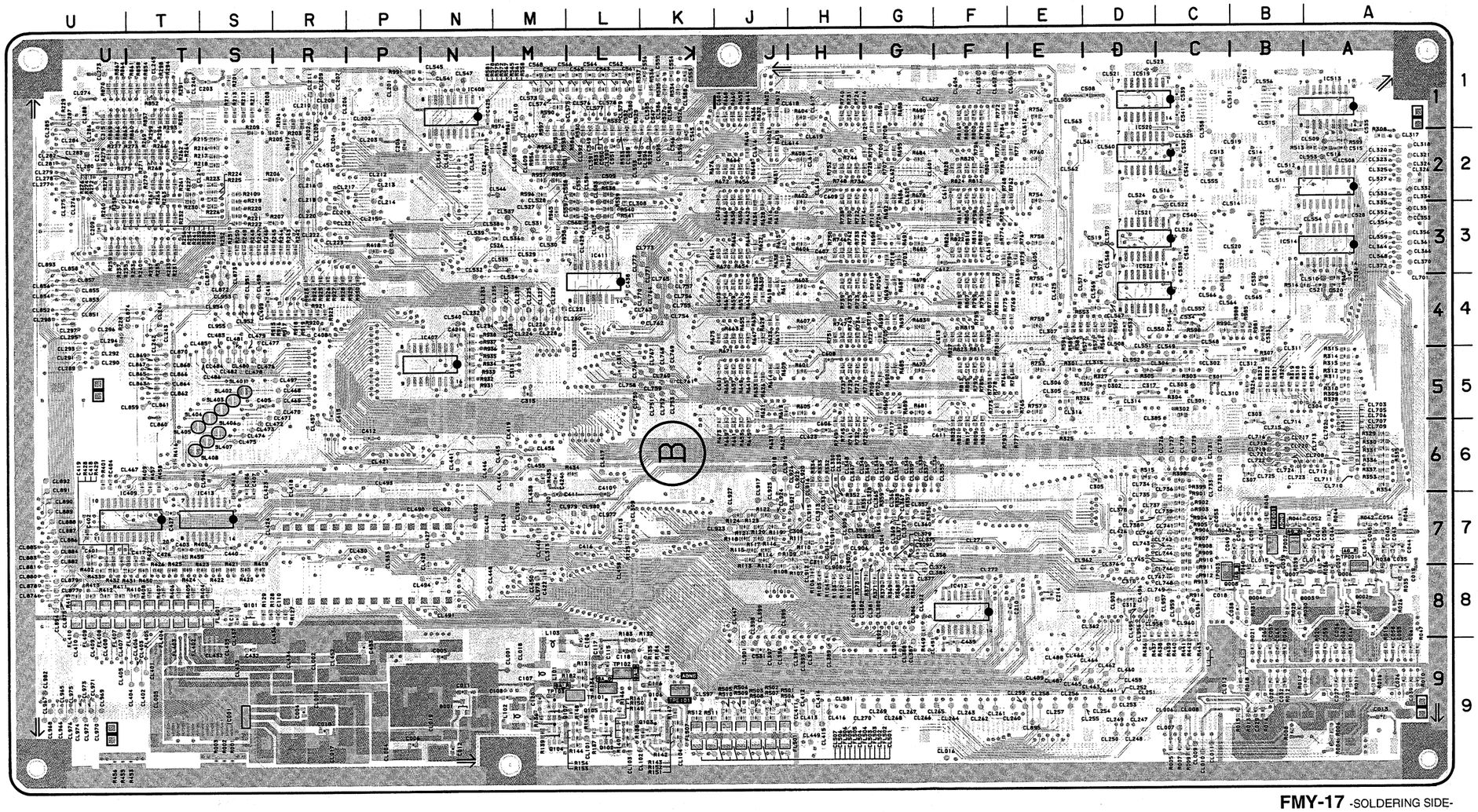
IC611 VRAM (B.B-FLD)

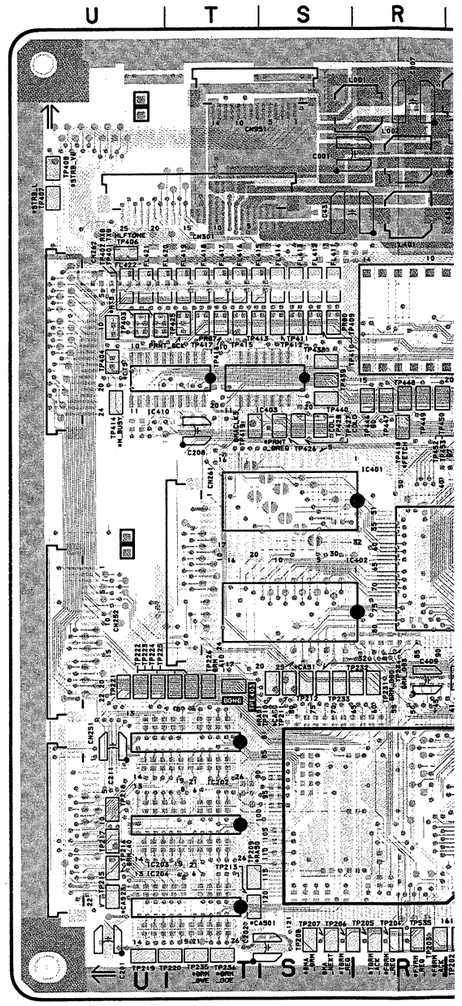
IC612 CXK1206ATM

IC612 VRAM (B.B-FLD)

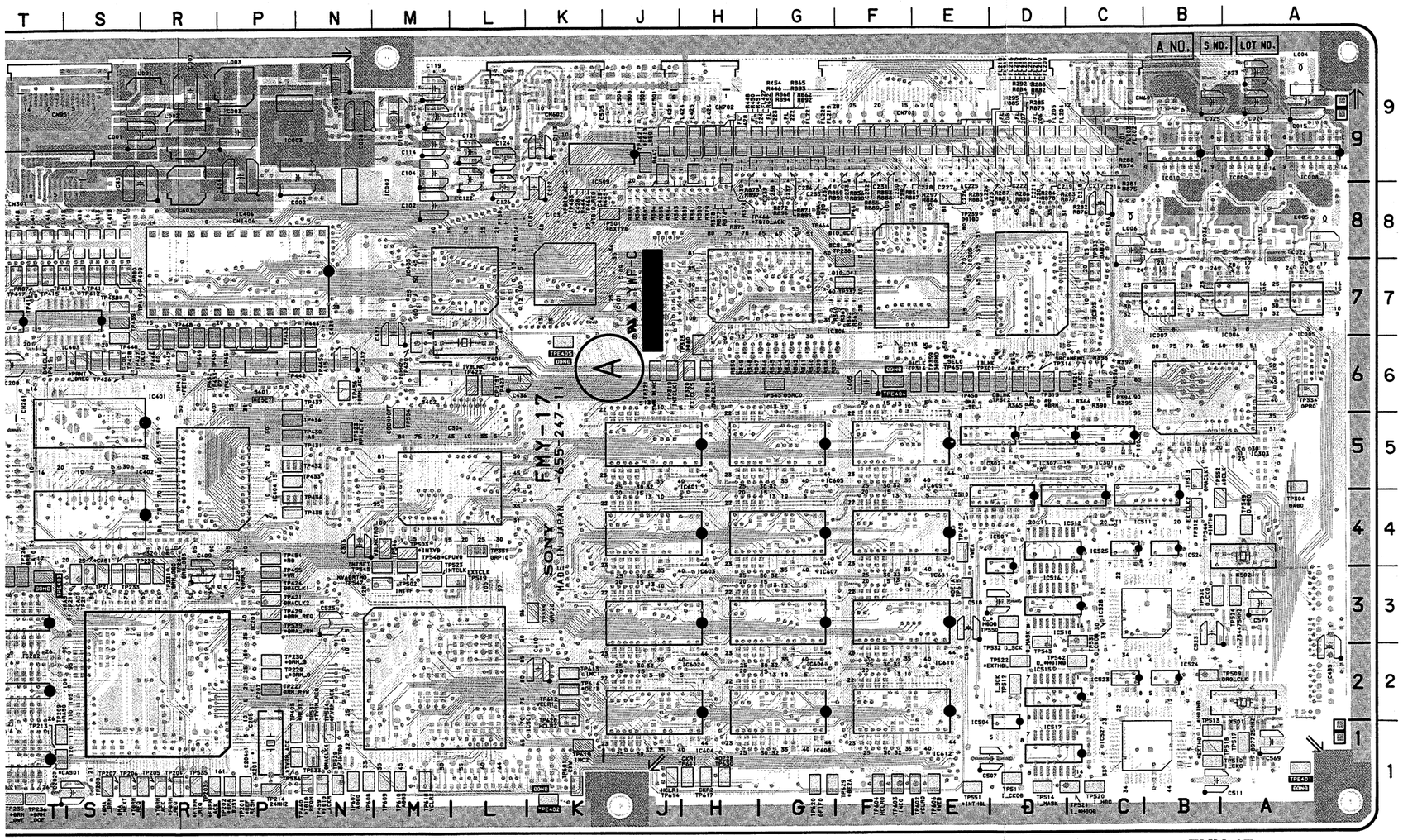
RF1F	5R	TO FMY-17 BOARD (5/6)
RRP1	3R	TO FMY-17 BOARD (3/6)
GF1F	5R	TO FMY-17 BOARD (5/6)
GRP1	3R	TO FMY-17 BOARD (3/6)
BF1F	5R	TO FMY-17 BOARD (5/6)
BRP1	3R	TO FMY-17 BOARD (3/6)

FMY-17 (DIGITAL VIDEO)





FMY-17 -SOLDERING SIDE-
1-655-247-11



FMY-17 -COMPONENT SIDE-
1-655-247-11

FMY-17 BOARD

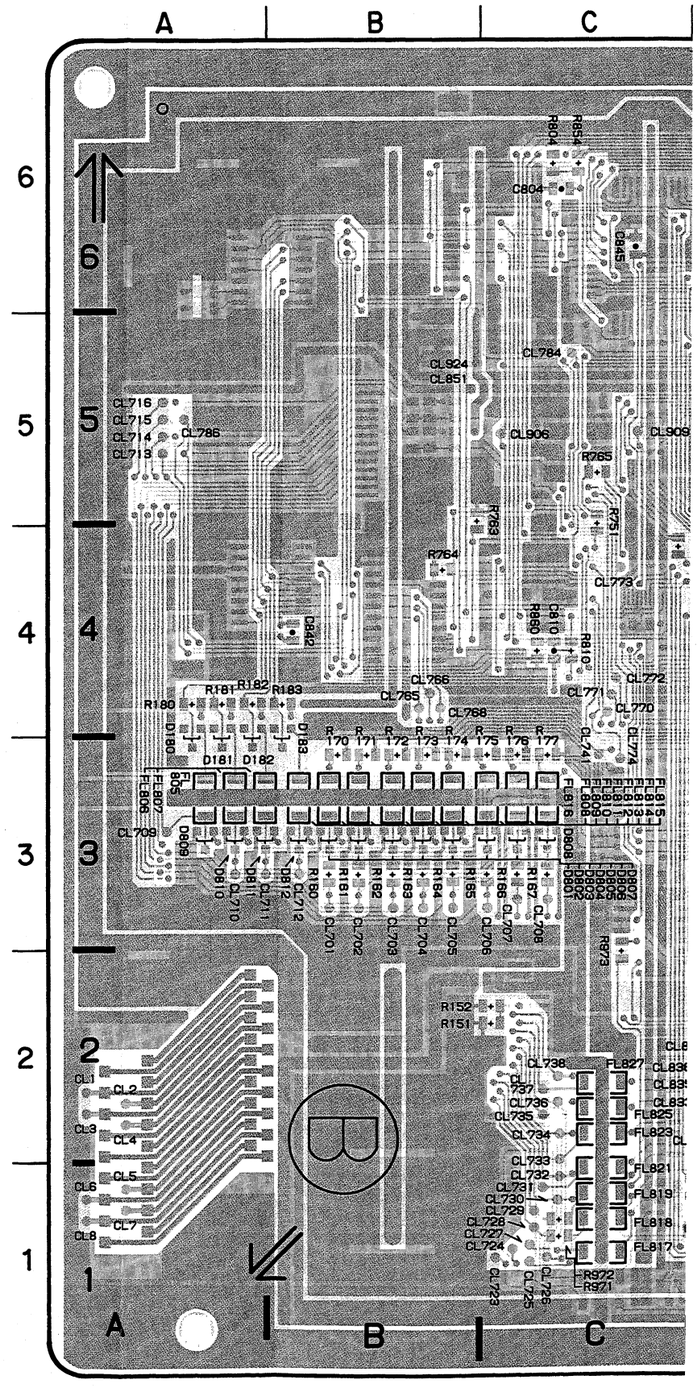
CNI406	N-8	FL419	T-8	IC512	C-4
		FL420	U-8	IC513	A-1 S
CN251	U-2	FL421	U-8	IC514	A-3 S
CN252	U-4	FL422	U-8	IC515	D-2
CN261	T-5	FL423	J-9	IC516	D-4
CN262	U-7	FL424	J-9	IC517	D-1
CN301	T-9	FL425	H-9	IC518	D-3
CN601	C-9	FL426	H-9	IC519	D-1 S
CN602	K-9	FL427	H-9	IC520	D-2 S
CN701	F-9	FL428	H-9	IC521	D-3 S
CN702	H-9	FL501	J-9 S	IC522	D-4 S
CN951	T-9	FL502	J-9 S	IC523	C-2
		FL503	J-9 S	IC524	B-2
D1	N-9 S	FL504	J-9 S	IC525	C-4
D2	A-8 S	FL505	J-9 S	IC526	B-4
D3	A-8 S	FL506	K-9 S	IC527	B-1
D4	B-8 S	FL507	K-9 S	IC528	B-3
				IC601	J-5
FL201	C-9	IC1	S-9 S	IC602	J-3
FL202	C-9	IC2	N-8	IC603	J-4
FL203	C-9	IC3	P-9	IC604	J-2
FL204	D-9	IC5	A-7	IC605	G-5
FL205	D-9	IC6	A-7	IC606	G-3
FL206	D-9	IC7	B-7	IC607	G-4
FL207	D-9	IC8	A-9	IC608	G-2
FL208	D-9	IC9	A-9	IC609	F-5
FL209	E-9	IC10	B-9	IC610	F-3
FL210	E-9	IC101	K-7	IC611	F-4
FL211	E-9	IC201	R-2	IC612	F-2
FL212	E-9	IC202	T-3		
FL213	E-9	IC203	T-2	L1	R-9
FL214	F-9	IC204	T-1	L2	R-9
FL215	F-9	IC205	F-7	L3	P-9
FL216	F-9	IC301	C-5	L4	A-9
FL217	F-9	IC302	E-5	L5	A-8
FL218	F-9	IC303	B-6	L6	C-8
FL219	G-9	IC304	M-5	L101	M-9 S
FL220	G-9	IC305	D-7	L102	M-9 S
FL221	G-9	IC306	G-7	L103	M-9 S
FL222	G-9	IC307	D-5	L401	R-9
FL223	G-9	IC401	S-5		
FL224	H-9	IC402	S-4	Q6	A-8 S
FL401	S-8 S	IC403	S-7	Q7	B-8 S
FL402	T-8 S	IC404	R-5	Q8	B-8 S
FL403	T-8 S	IC405	L-7	Q101	S-8 S
FL404	T-8 S	IC406	N-8	Q102	L-9 S
FL405	T-8 S	IC407	N-5 S	Q103	K-9 S
FL406	T-8 S	IC408	N-1 S	Q104	M-9 S
FL407	U-8 S	IC409	T-7 S	Q105	L-9 S
FL408	U-8 S	IC410	T-7	Q106	K-9 S
FL409	U-8 S	IC411	L-4 S	Q107	M-9 S
FL410	U-8 S	IC412	F-8 S		
FL411	S-8	IC413	S-7 S	X201	P-1
FL412	S-8	IC501	M-2	X401	L-6
FL413	S-8	IC504	D-1	X501	A-2
FL414	S-8	IC507	D-4	X502	A-4
FL415	T-8	IC508	A-2 S		
FL416	T-8	IC509	K-9	S:SOLDERING SIDE	
FL417	T-8	IC510	D-4		
FL418	T-8	IC511	B-4		

SY-11 BOARD

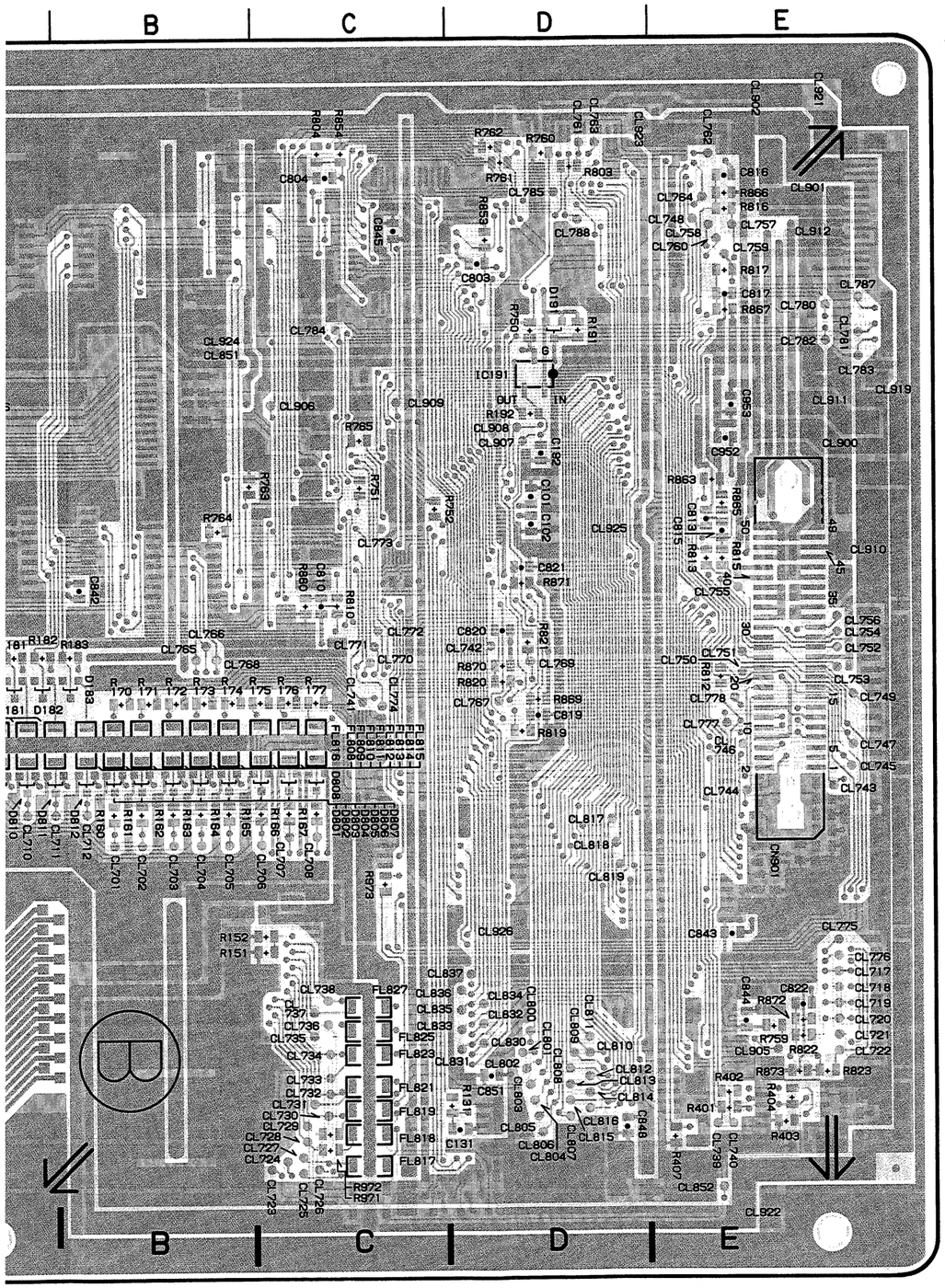
CN1	A-1		IC101	C-4	
CN201	E-6		IC102	E-2	
CN401	C-3		IC103	B-4	
CN402	C-2		IC111	D-2	
CN601	E-3		IC112	D-3	
CN602	E-2		IC113	D-2	
CN701	D-6		IC114	E-3	
CN801	A-2		IC115	C-3	
CN901	E-4	S	IC131	D-1	
CN951	B-5		IC191	D-5	S
			IC201	C-6	
CV301	E-2		IC202	E-4	
			IC301	E-2	
D180	A-3	S	IC401	E-1	
D181	A-3	S	IC501	D-6	
D182	A-3	S	IC502	B-4	
D183	B-3	S	IC511	C-3	
D191	D-5	S	IC512	C-6	
D401	E-1		IC513	B-6	
D801	B-3	S			
D802	B-3	S	L301	E-2	
D803	B-3	S	L951	E-5	
D804	B-3	S			
D805	B-3	S	Q131	C-1	
D806	C-3	S	Q511	C-1	
D807	C-3	S	Q521	D-1	
D808	C-3	S	Q531	D-1	
D809	A-3	S			
D810	A-3	S	X101	D-4	
D811	A-3	S			
D812	B-3	S	S:SOLDERING SIDE		

FL801	C-1	
FL802	C-1	
FL803	C-1	
FL804	C-1	
FL805	A-3	S
FL806	A-3	S
FL807	A-3	S
FL808	B-3	S
FL809	B-3	S
FL810	B-3	S
FL811	B-3	S
FL812	B-3	S
FL813	B-3	S
FL814	C-3	S
FL815	C-3	S
FL816	C-3	S
FL817	C-1	S
FL818	C-1	S
FL819	C-1	S
FL820	C-1	
FL821	C-1	S
FL822	C-1	
FL823	C-2	S
FL824	C2	
FL825	C-2	S
FL826	C-2	
FL827	C-2	S
FL828	C-2	

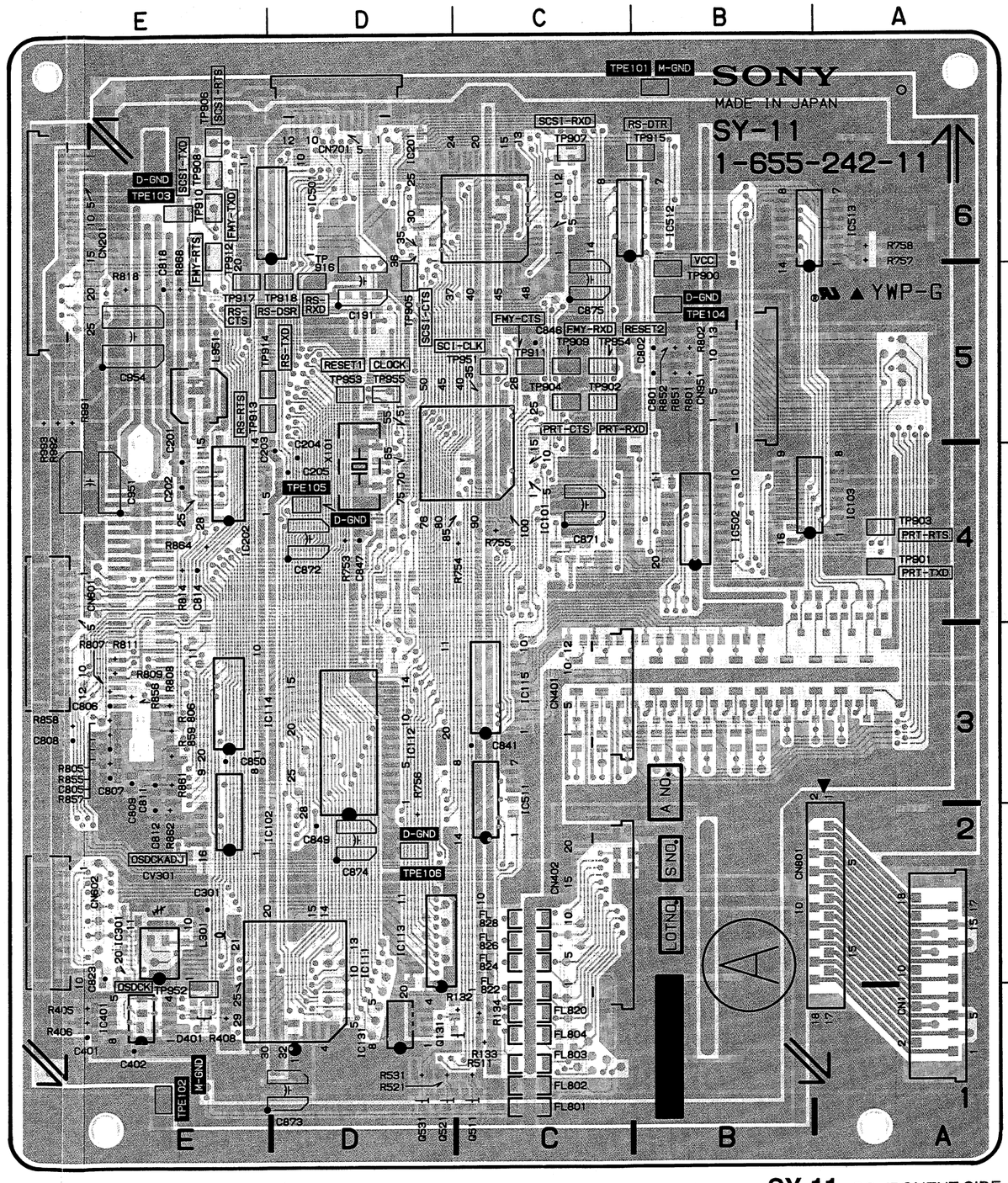
SY-11 (SYSTEM CONTROL)



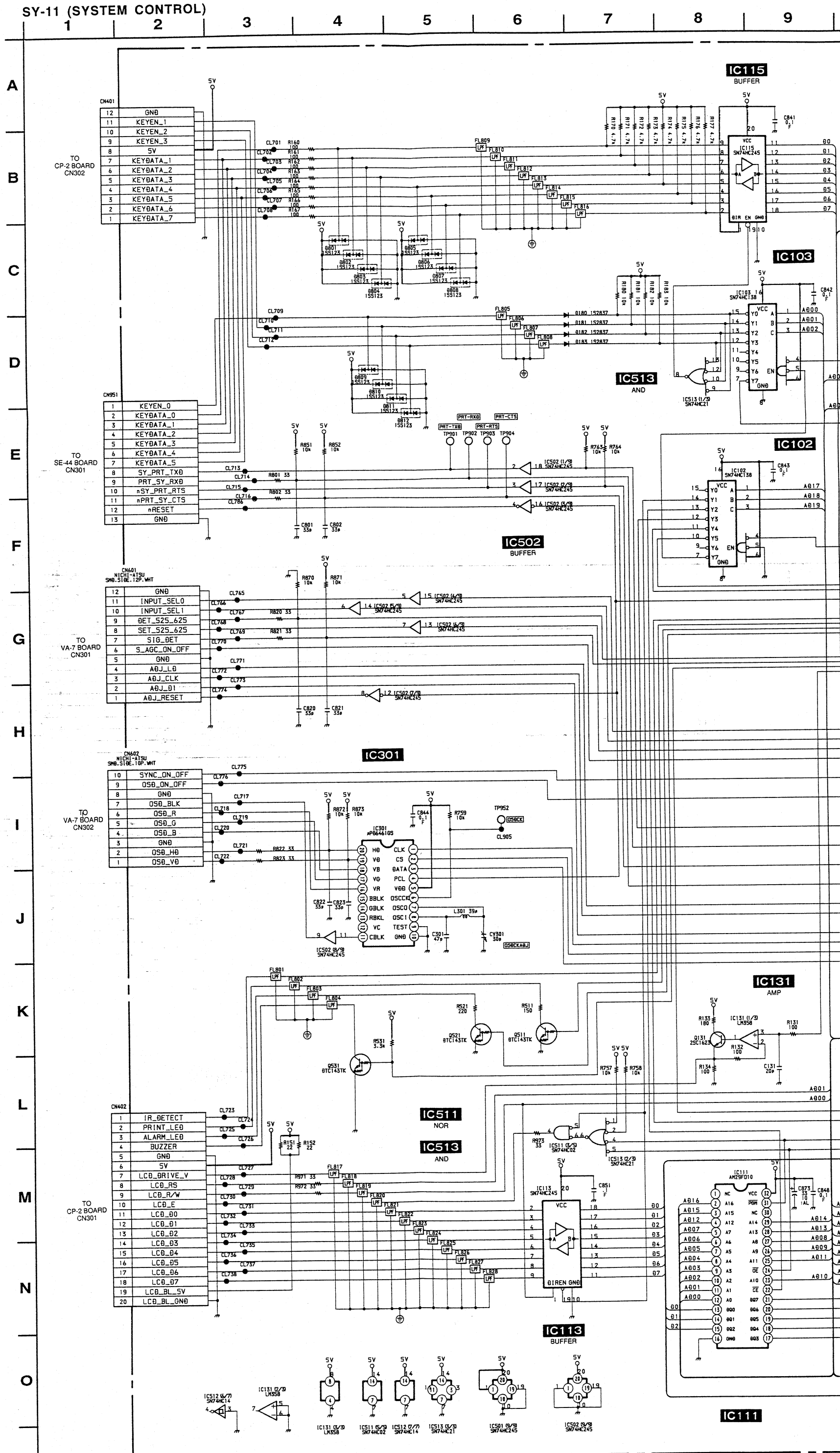
EM CONTROL)



SY-11 -SOLDERING SIDE-
1-655-242-11



SY-11 -COMPONENT SIDE-
1-655-242-11


IC115
BUFFER
IC103
IC513
AND
IC102
IC502
BUFFER
IC301
IC131
AMP
IC511
NOR
IC513
AND
IC113
BUFFER
IC111
CN401
CN951
CN601
CN602
CN402
TO CP-2 BOARD CN302
TO SE-44 BOARD CN301
TO VA-7 BOARD CN301
TO VA-7 BOARD CN302
TO CP-2 BOARD CN301
KEYEN_1
KEYEN_2
KEYEN_3
KEYDATA_1
KEYDATA_2
KEYDATA_3
KEYDATA_4
KEYDATA_5
KEYDATA_6
KEYDATA_7
KEYEN_0
SY_PRT_TXD
PRT_SY_RXD
nSY_PRT_RTS
nPRT_SY_CTS
nRESET
INPUT_SEL0
INPUT_SEL1
DET_525_625
SET_525_625
SIG_DET
S_AGC_ON_OFF
ADJ_LD
ADJ_CLK
ADJ_D1
ADJ_RESET
SYNC_ON_OFF
OSD_ON_OFF
OSD_BLK
OSD_R
OSD_G
OSD_B
OSD_HD
OSD_VD
IR_DETECT
PRINT_LED
ALARM_LED
BUZZER
LCD_DRIVE_V
LCD_RS
LCD_R/W
LCD_E
LCD_D0
LCD_D1
LCD_D2
LCD_D3
LCD_D4
LCD_D5
LCD_D6
LCD_D7
LCD_BL_5V
LCD_BL_GND

IC115 BUFFER

IC103

IC513 (1/3) AND

IC102

IC401 AMP

IC401 (1/2) LM393

IC401 (2/2) LM393

IC512 (1/7) SN74HC14

IC512 (2/7) SN74HC14

IC512 (3/7) SN74HC14

IC512 (4/7) SN74HC14

IC512 (5/7) SN74HC14

IC512 (6/7) SN74HC14

IC512 (7/7) SN74HC14

IC512 INV.

IC511 (1/5) SN74HC02

IC511 NOR

IC201 MB89371

IC114 BUFFER

IC202

IC202 MAX211CAI

IC101 H8/3040

IC131 AMP

IC131 (1/3) LM358

IC111 AM29F010

IC112 HN58C66FP-25

IC501 BUFFER

IC501 (1/9) SN74HC245

IC501 (2/9) SN74HC245

IC501 (3/9) SN74HC245

IC501 (4/9) SN74HC245

IC501 (5/9) SN74HC245

IC191 +5V REG

IC191 PST572CMT

CN1 MOLEX 81P.SIDE.18P.WHT		CN801 MOLEX 81P.TOP.18P.WHT	
1	GND_H	GND_H	18
2	GND_H	GND_H	17
3	GND_H	GND_H	16
4	GND_H	GND_H	15
5	V_H	V_H	14
6	V_H	V_H	13
7	V_H	V_H	12
8	V_H	V_H	11
9	V_H	V_H	10
10	V_H	V_H	9
11	V_H	V_H	8
12	V_H	V_H	7
13	V_H	V_H	6
14	GND_H	GND_H	5
15	GND_H	GND_H	4
16	GND_H	GND_H	3
17	GND_H	GND_H	2
18	GND_H	GND_H	1

TO POWER SUPPLY CN801

TO THEARMAL HEAD

IC115 BUFFER

IC103

IC513 AND

IC102

IC502 BUFFER

IC401 AMP

IC201

IC512 INV.

IC511 NOR

IC101

IC301

IC131 AMP

IC511 NOR

IC513 AND

IC113 BUFFER

IC111

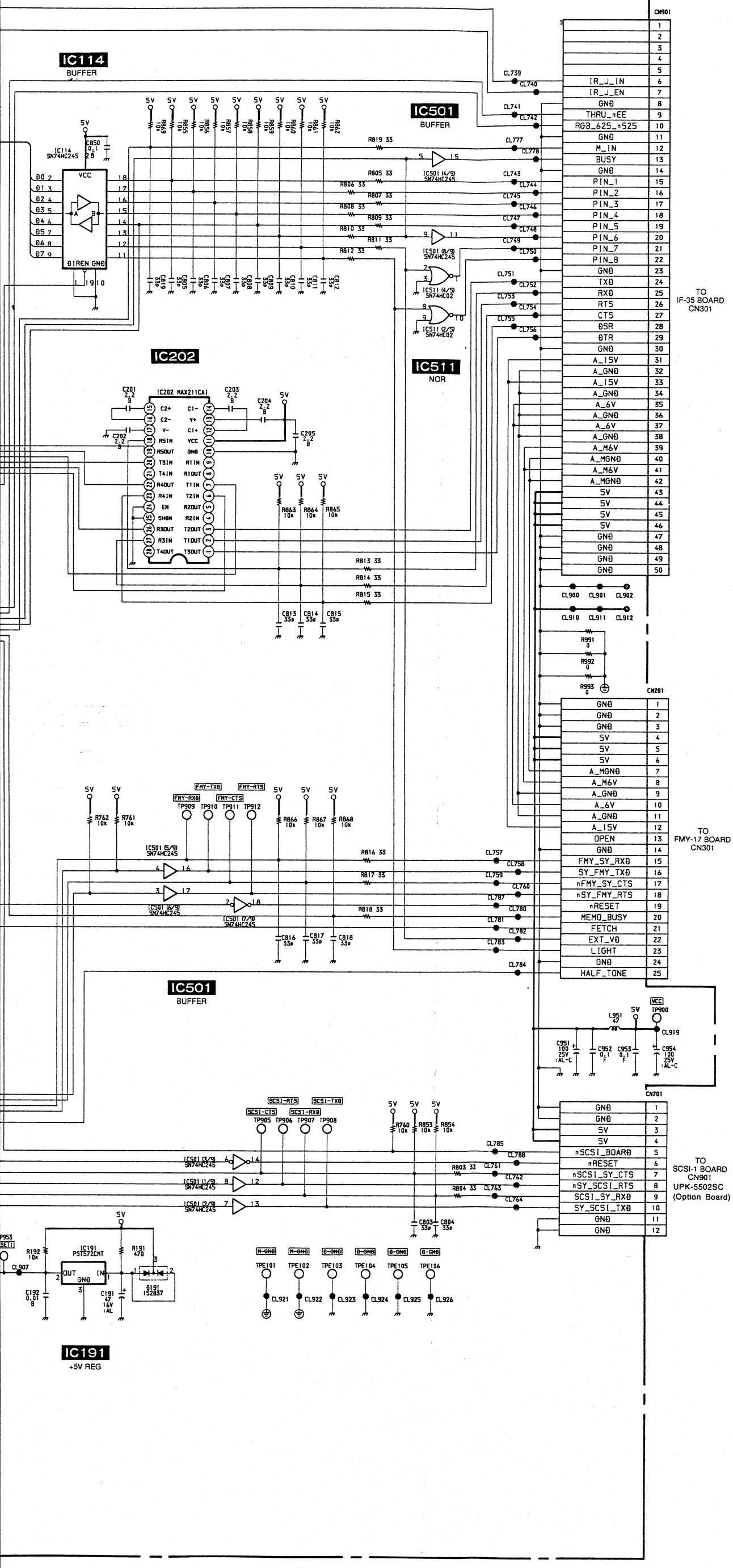
IC112

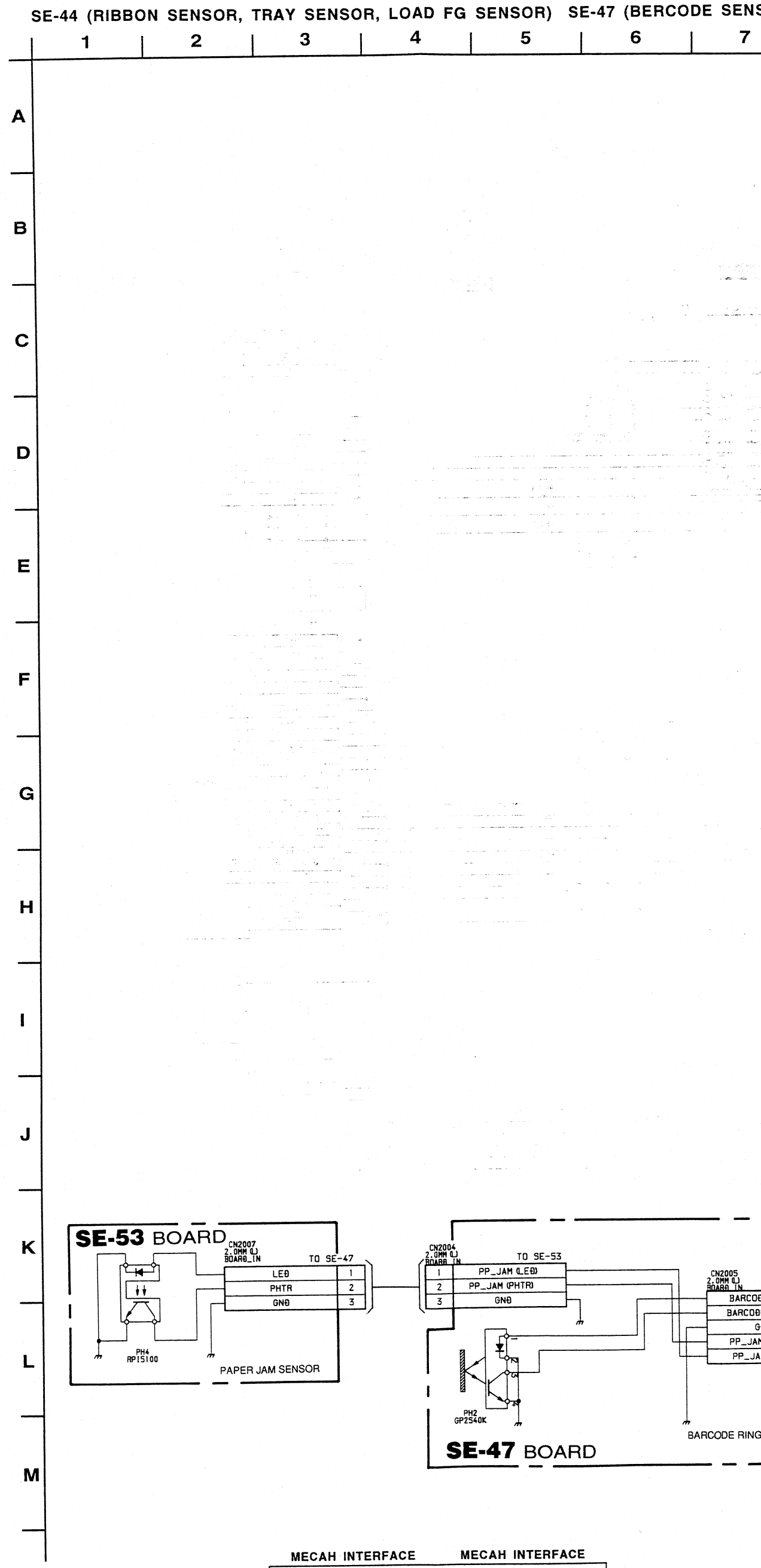
TO POWER SUPPLY CN801

TO THEARMAL HE

16 | 17 | 18 | 19 | 20 | 21 | 22

SY-11 BOARD





MECAH INTERFACE	MECAH INTERFACE
SE-44	SE-44

8 9 10 11 12 13 14 15 16 17 18 19

SE-44 BOARD

PLT_POS_SENS — R6 150 — PH1 GP1S54 — SS1

RBN_SENS — D1 GL480 — R7 220 — Q3 PT480F — SS2

TRAY_SENS — D2 GL480 — R8 220 — Q4 PT480F — SS3

LOAD_FG_SENS — R9 150 — PH2 GP1S54 — SS7

BARCODE_FG_SENS — CN1108 1.5MM (I) — TO SE-54 — R10 150 — SS8

RBN_CD_SENS — D3 GL514A — R12 47 — Q5 PT501A — SS4

RBN_FG — R14 150 — PH3 GP2940K — SS5

JAM_SENS — SS6

SS9

5V — Q1 2SB798 — R4 10k — R5 1k — Q2 BTC124EK

SS10 SS11 SS12 SS13

Q6 2SC1623-T1 — R11 33 — IC2 (2/4) μPC324G2 — R18 10k — C2 470p

Q7 2SC1623-T1 — R13 33 — IC2 (3/4) μPC324G2 — R19 10k — C3 470p

Q8 2SC1623-T1 — R15 33 — IC2 (4/4) μPC324G2 — R20 10k — C4 470p

IC2 (1/4) μPC324G2 — C5 0.1μ

IC2 AMP

SE-54 BOARD

CN2008 2.0MM (L) BOARD_IN — TO SE-44

LED	1	
PHTR	2	
GND	3	

PH5 GP1S51 — BARCODE FG SENSOR

CN1107 1.5MM (I) — BARCODE / JAM_SENS W — TO SE-44

1	BARCODE (LED)	CL98
2	BARCODE (PHTR)	CL99
3	GND	
4	JAM (PHTR)	CL100
5	JAM (LED)	CL101

R16 150 — R17 150 — GP2540K GP1S54

SU-18 BOARD

CN2012 2.0MM (I) BOARD_IN — TO SE-44

HEAD_MTR0	1	
HEAD_MTR1	2	

M3 BC_MTR

FAN MOTOR

TO FMY-17 CN9

R, LOAD FG SENSOR) SE-47 (BERCODE SENSOR) SE-53 (PAPER JAM SENSOR) SE-54 (BARCODE FG SENSOR) SU-18 (HEAD MOTOR)

4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15

SE-44 BOARD

PLT_POS_SENS — R6 150 — PH1 GP1S54 — SS1

RBN_SENS — B1 GL480 — R7 220 — Q3 PT480F — SS2

TRAY_SENS — B2 GL480 — R8 220 — Q4 PT480F — SS3

SS11 SS12 SS13

LOAD_FG_SENS — R9 150 — PH2 GP1S54 — SS7

SE-54 BOARD

CN2008 2.0MM (L) BOARD IN — TO SE-44

LED	1
PHTR	2
GND	3

PH5 GP1S51

BARCPDE FG SENSOR

BARCODE_FG_SENS — CN1108 1.5MM (I) — TO SE-54

1	LED	CL102
2	PHTR	CL103
3	GND	CL104

R10 150 — SS8

RBN_CD_SENS — B3 GL514A — R12 — Q5 PT501A — SS4

5V — Q6 2SC1623-T1 — R11 33 — IC2 (2/4) μPC324G2 — R18 10k — C2 470p

5V — Q7 2SC1623-T1 — R13 33 — IC2 (3/4) μPC324G2 — R19 10k — C3 470p

RBN_FG — R14 150 — PH3 GP2940K — SS5

IC2 AMP

5V — Q8 2SC1623-T1 — R15 33 — IC2 (4/4) μPC324G2 — R20 10k — C4 470p

CN2004 2.0MM (L) BOARD IN — TO SE-53

1	PP_JAM (LED)
2	PP_JAM (PHTR)
3	GND

CN2005 2.0MM (L) BOARD IN — TO SE-44

BARCODE (LED)	1
BARCODE (PHTR)	2
GND	3
PP_JAM (PHTR)	4
PP_JAM (LED)	5

PH2 GP2S40K

BARCODE RING SENSOR

CN1107 1.5MM (I) — BARCODE — JAM_SENS W

1	BARCODE (LED)	CL98
2	BARCODE (PHTR)	CL99
3	GND	
4	JAM (PHTR)	CL100
5	JAM (LED)	CL101

GP2S40K GP1S54

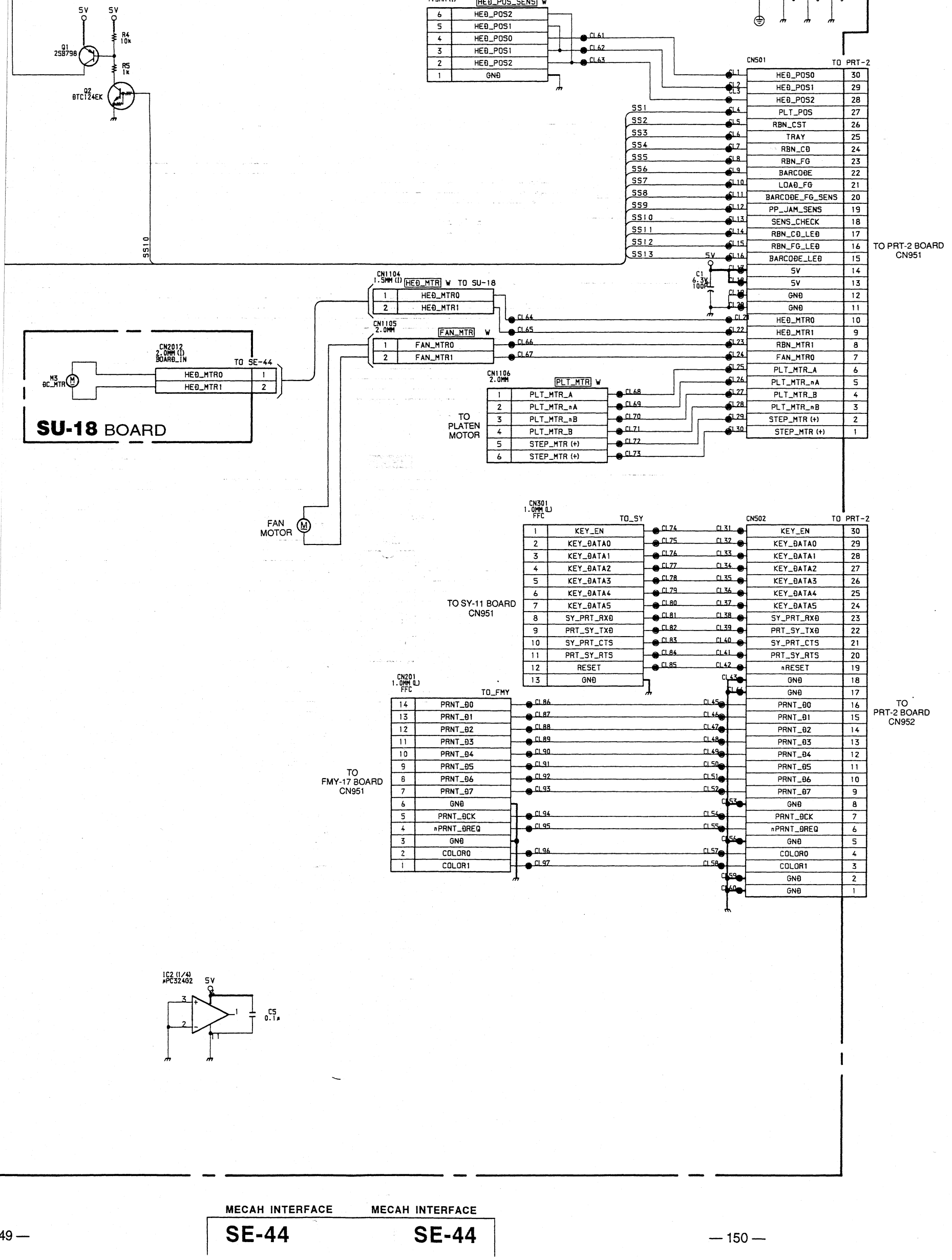
R16 150 — SS6

R17 150 — SS9

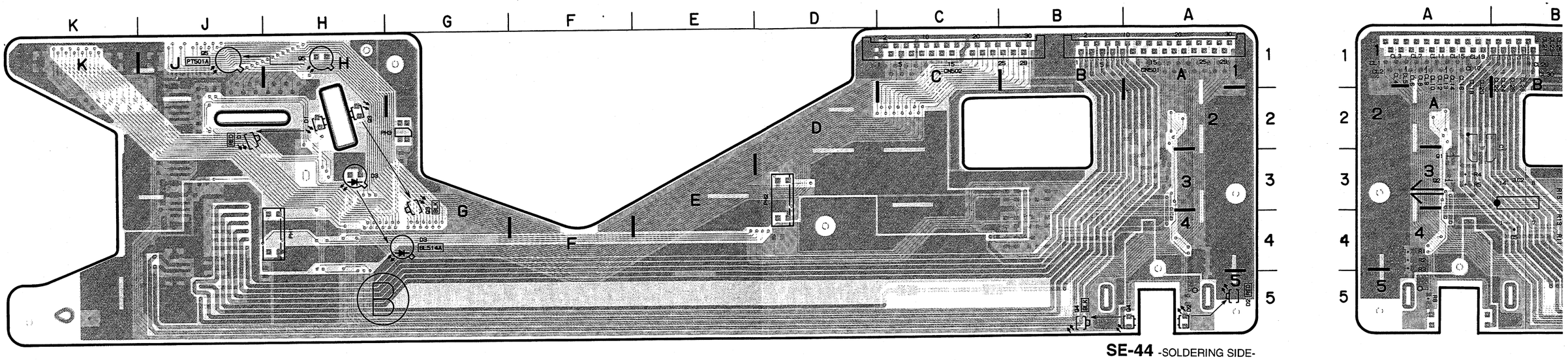
SE-47 BOARD

TER ACE MECAH INTERFACE

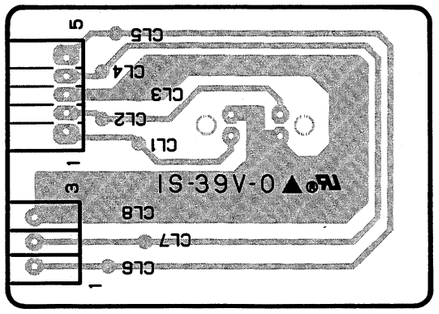
SE-44


5V
5V
R4 10k
Q1 2SB798
R5 1k
Q2 BTC124EK
SS10
CN1103 1.5MM (1)
TO SE-26
HE0_POS_SENS W
6 HE0_POS2
5 HE0_POS1
4 HE0_POS0
3 HE0_POS1
2 HE0_POS2
1 GND
CL61
CL62
CL63
R1 0
R2 0
R3 0
CN501
TO PRT-2
SS1
SS2
SS3
SS4
SS5
SS6
SS7
SS8
SS9
SS10
SS11
SS12
SS13
CL1 HE0_POS0 30
CL2 HE0_POS1 29
CL3 HE0_POS2 28
CL4 PLT_POS 27
CL5 RBN_CST 26
CL6 TRAY 25
CL7 RBN_C0 24
CL8 RBN_FG 23
CL9 BARCO0E 22
CL10 LOA0_FG 21
CL11 BARCO0E_FG_SENS 20
CL12 PP_JAM_SENS 19
CL13 SENS_CHECK 18
CL14 RBN_C0_LE0 17
CL15 RBN_FG_LE0 16
CL16 BARCO0E_LE0 15
TO PRT-2 BOARD CN951
5V
C1 4.3V 100F
CL17 5V 14
CL18 5V 13
CL19 GND 12
CL20 GND 11
CL21 HE0_MTR0 10
CL22 HE0_MTR1 9
CL23 RBN_MTR1 8
CL24 FAN_MTR0 7
CL25 PLT_MTR_A 6
CL26 PLT_MTR_nA 5
CL27 PLT_MTR_B 4
CL28 PLT_MTR_nB 3
CL29 STEP_MTR (+) 2
CL30 STEP_MTR (+) 1
CN1104 1.5MM (1) HE0_MTR W TO SU-18
1 HE0_MTR0
2 HE0_MTR1
CL64
CL65
CN1105 2.0MM FAN_MTR W
1 FAN_MTR0
2 FAN_MTR1
CL66
CL67
CN2012 2.0MM (1) BOARD_IN
TO SE-44
M3 BC_MTR
HE0_MTR0 1
HE0_MTR1 2
SU-18 BOARD
CN1106 2.0MM PLT_MTR W
1 PLT_MTR_A
2 PLT_MTR_nA
3 PLT_MTR_nB
4 PLT_MTR_B
5 STEP_MTR (+)
6 STEP_MTR (+)
CL68
CL69
CL70
CL71
CL72
CL73
TO PLATEN MOTOR
FAN MOTOR
CN301 1.0MM (L) FFC
TO_SY
1 KEY_EN
2 KEY_0ATA0
3 KEY_0ATA1
4 KEY_0ATA2
5 KEY_0ATA3
6 KEY_0ATA4
7 KEY_0ATA5
8 SY_PRT_RX0
9 PRT_SY_TX0
10 SY_PRT_CTS
11 PRT_SY_RTS
12 RESET
13 GN0
CL74
CL75
CL76
CL77
CL78
CL79
CL80
CL81
CL82
CL83
CL84
CL85
CN502
TO PRT-2
CL31 KEY_EN 30
CL32 KEY_0ATA0 29
CL33 KEY_0ATA1 28
CL34 KEY_0ATA2 27
CL35 KEY_0ATA3 26
CL36 KEY_0ATA4 25
CL37 KEY_0ATA5 24
CL38 SY_PRT_RX0 23
CL39 PRT_SY_TX0 22
CL40 SY_PRT_CTS 21
CL41 PRT_SY_RTS 20
CL42 nRESET 19
CL43 GN0 18
CL44 GN0 17
TO SY-11 BOARD CN951
CN201 1.0MM (L) FFC
TO_FMY
14 PRNT_00
13 PRNT_01
12 PRNT_02
11 PRNT_03
10 PRNT_04
9 PRNT_05
8 PRNT_06
7 PRNT_07
6 GN0
5 PRNT_0CK
4 nPRNT_0REQ
3 GN0
2 COLOR0
1 COLOR1
CL86
CL87
CL88
CL89
CL90
CL91
CL92
CL93
CL94
CL95
CL96
CL97
CL45 PRNT_00 16
CL46 PRNT_01 15
CL47 PRNT_02 14
CL48 PRNT_03 13
CL49 PRNT_04 12
CL50 PRNT_05 11
CL51 PRNT_06 10
CL52 PRNT_07 9
CL53 GN0 8
CL54 PRNT_0CK 7
CL55 nPRNT_0REQ 6
CL56 GN0 5
CL57 COLOR0 4
CL58 COLOR1 3
CL59 GN0 2
CL60 GN0 1
TO FMY-17 BOARD CN951
TO PRT-2 BOARD CN952
IC2 (1/4) μPC324G2
5V
C5 0.1μ

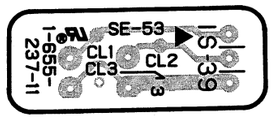
SE-44 (RIBBON SENSOR, TRAY SENSOR, LOAD FG SENSOR) SE-47 (BERCODE SENSOR) SE-53 (PAPER JAM SENSOR) SE-54 (BARCODE FG SENSOR) SU-18 (HEAD MOTOR)



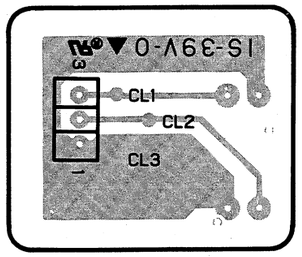
SE-44 -SOLDERING SIDE-
1-655-244-11



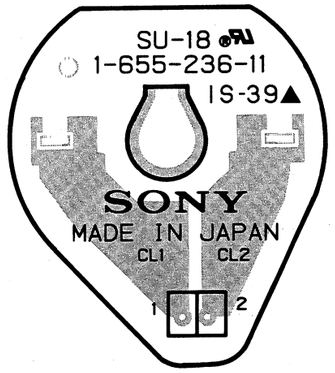
SE-47 -SOLDERING SIDE-
1-655-232-11



SE-53 -SOLDERING SIDE-
1-655-237-11

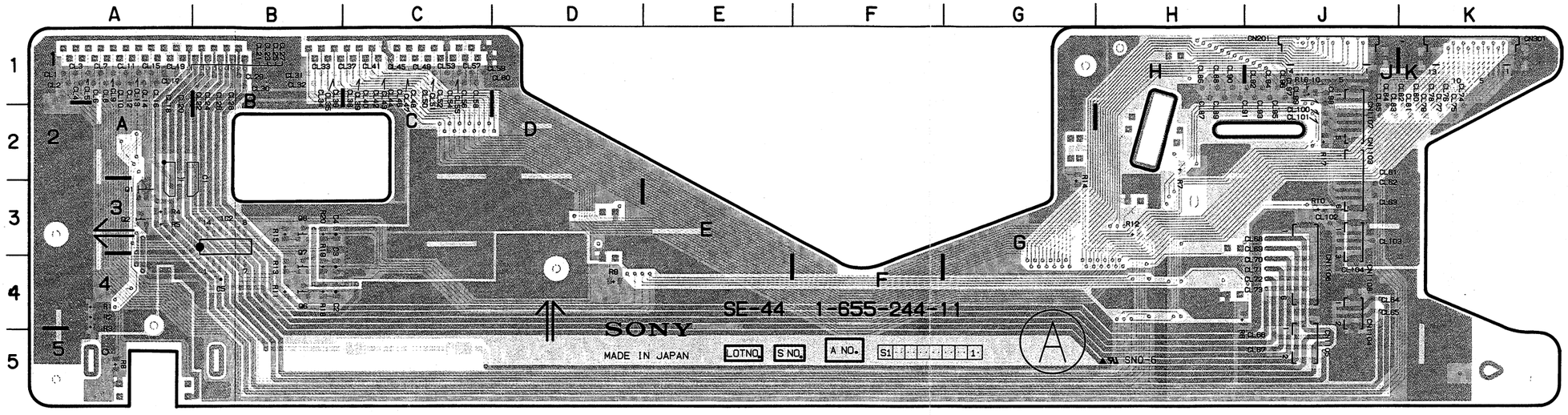


SE-54 -SOLDERING SIDE-
1-655-238-11



SU-18 -SOLDERING SIDE-
1-655-236-11

) MOTOR)



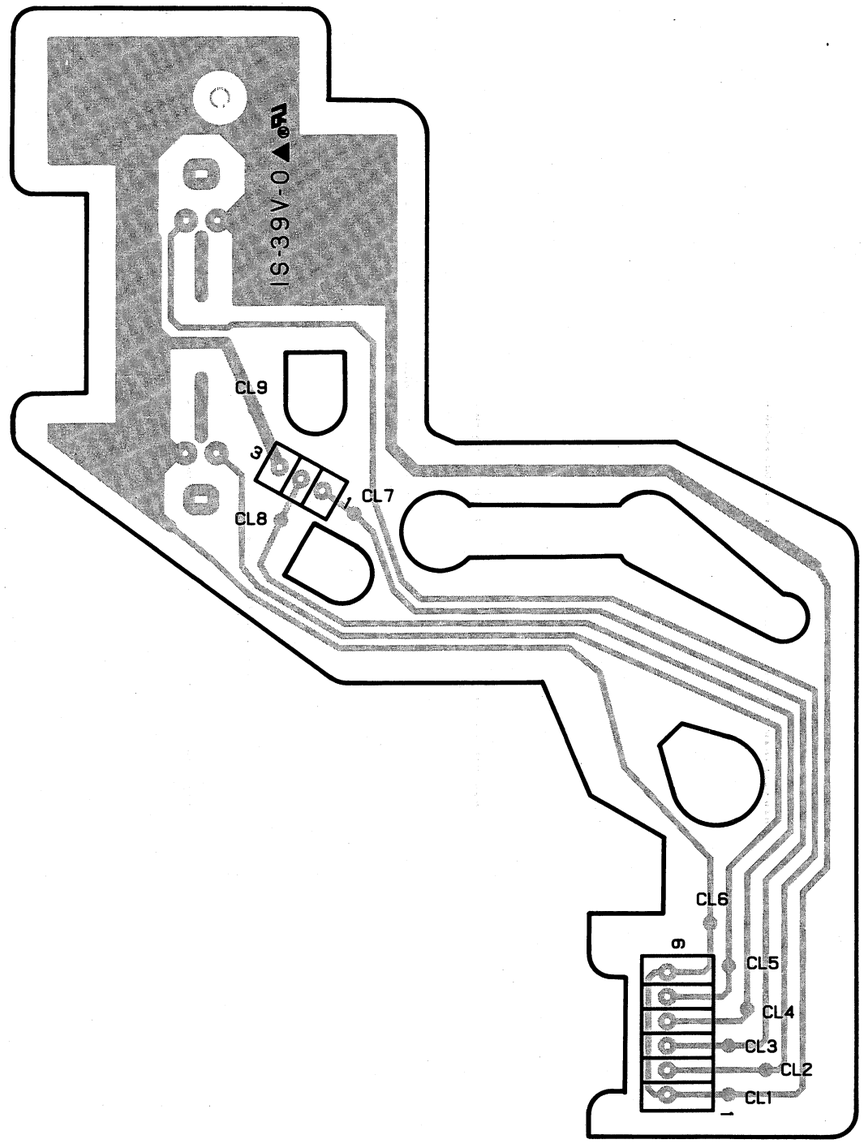
SE-44 -COMPONENT SIDE-

1-655-244-11

SE-44 BOARD

CN201	J-1
CN301	K-1
CN501	B-1 S
CN502	C-1 S
CN1103	J-3
CN1104	J-4
CN1105	J-5
CN1106	J-4
CN1107	J-2
CN1108	J-3
D1	H-2 S
D2	A-5 S
D3	H-3 S
IC2	B-3
PH1	H-4 S
PH2	D-4 S
PH3	G-2 S
Q1	A-3
Q2	A-3
Q3	H-2 S
Q4	A-5 S
Q5	H-1 S
Q6	B-4
Q7	B-4
Q8	B-3

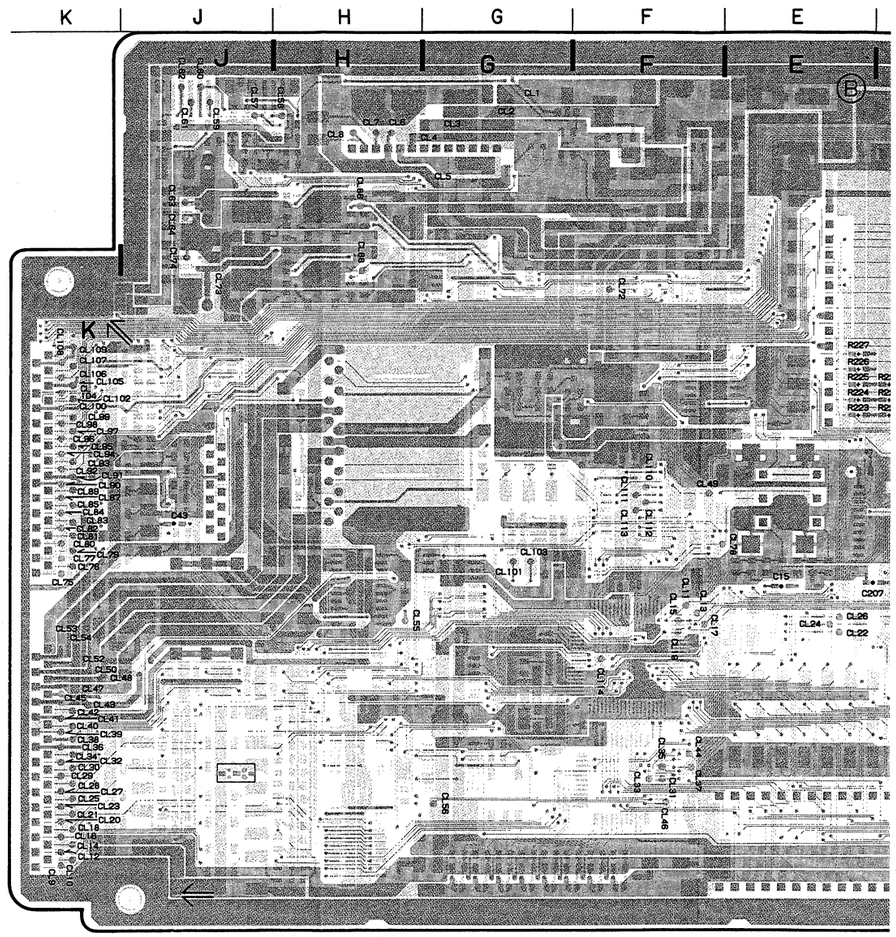
S:SOLDERING SIDE

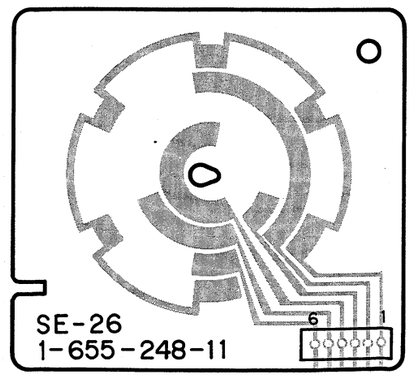


SE-45 -SOLDERING SIDE-
1-655-230-11

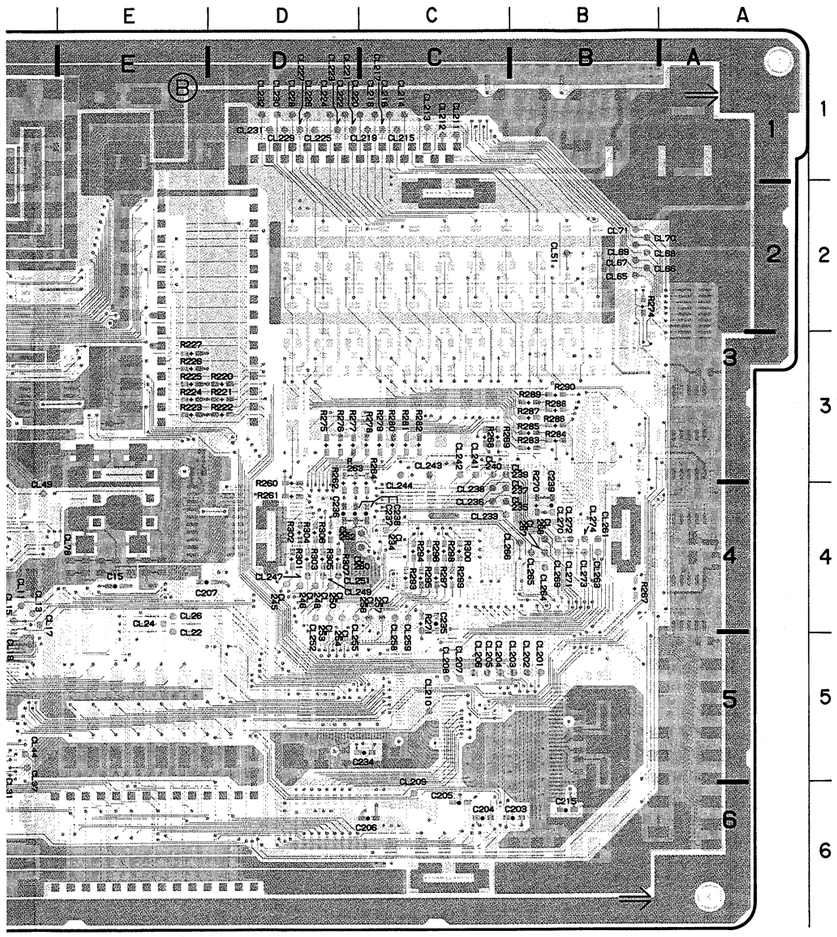
PRT-2 BOARD

CNI7	D-6	FL225	D-2
CNI206	D-2	FL226	C-2
		FL227	C-2
CN1	G-1	FL228	B-2
CN201	J-4	FL229	C-2
CN401	A-2	FL230	D-2
CN801	C-1	FL231	C-2
CN951	K-6	FL232	C-2
CN952	K-4		
CN1111	H-1	IC1	H-6
CN1112	J-1	IC2	G-5
CN1113	J-2	IC3	E-4
CN1114	J-2	IC4	H-5
		IC5	H-5
D1	J-1	IC6	G-4
D2	J-2	IC7	D-6
D223	A-4	IC8	G-5
		IC9	F-4
FL1	J-6	IC10	G-2
FL2	J-6	IC11	H-4
FL3	J-6	IC12	F-2
FL4	K-6	IC13	F-5
FL5	J-6	IC14	F-5
FL6	K-6	IC15	F-2
FL7	J-5	IC16	F-3
FL8	K-5	IC17	G-4
FL9	J-5	IC18	H-4
FL10	K-5	IC201	A-3
FL11	J-5	IC202	A-4
FL12	K-5	IC203	D-6
FL13	J-5	IC204	D-4
FL14	J-5	IC205	D-4
FL15	J-5	IC206	D-2
FL16	J-5	IC207	C-5
FL17	J-1	IC208	D-4
FL18	J-1	IC209	A-4
FL19	J-1	IC210	D-5
FL20	K-4	IC211	B-4
FL21	K-4		
FL22	K-4	L1	F-1
FL23	K-4	L2	F-2
FL24	K-3	L3	G-2
FL201	J-3	L201	B-1
FL202	K-3	L202	B-1
FL203	J-3		
FL204	J-2	Q1	J-4
FL205	K-3	Q2	G-1
FL206	J-3	Q3	G-1
FL207	K-3	Q4	J-2
FL208	J-3	Q5	H-2
FL209	K-3	Q6	H-2
FL210	K-3	Q7	J-2
FL211	B-2	Q8	H-2
FL212	C-2	Q9	H-2
FL213	D-2	Q10	F-3
FL214	B-2	Q11	F-3
FL215	C-2		
FL216	D-2	S1	G-6
FL217	B-2	S2	E-4
FL218	C-2	S3	E-4
FL219	D-2		
FL220	B-2	TH1	E-4
FL221	C-2		
FL222	D-2	X1	G-5
FL223	B-2	X201	B-5
FL224	C-2	X202	C-5

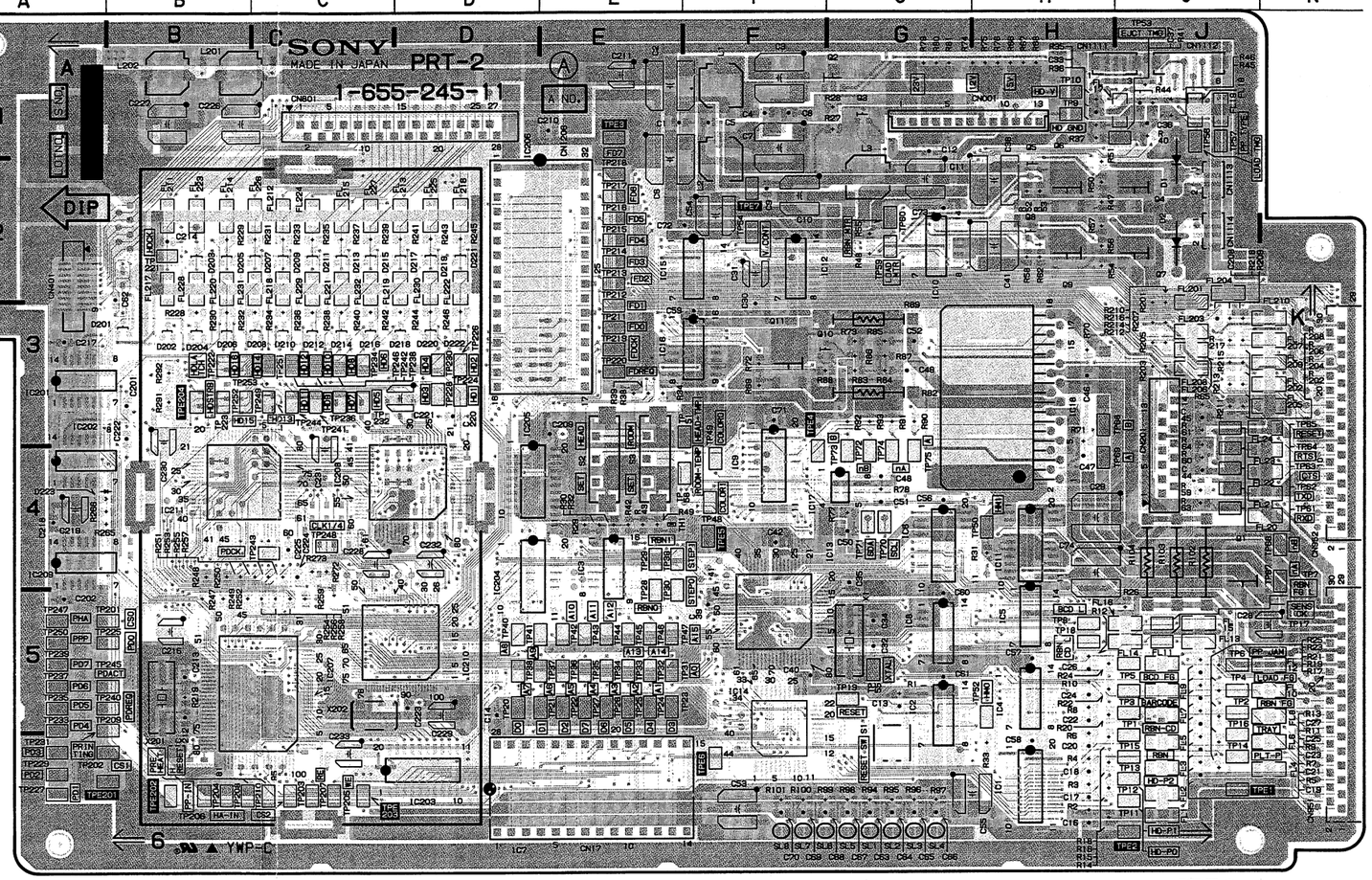




SE-26 -SOLDERING SIDE-
1-655-248-11

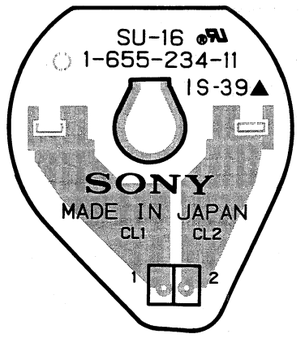


PRT-2 -SOLDERING SIDE-
1-655-245-11

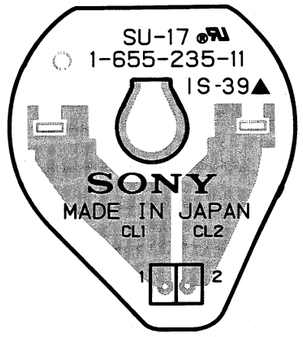


PRT-2 -COMPONENT SIDE-
1-655-245-11

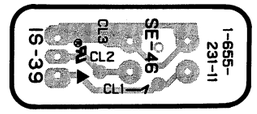
SIDE-



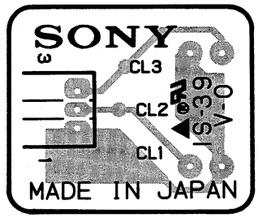
SU-16 -SOLDERING SIDE-
1-655-234-11



SU-17 -SOLDERING SIDE-
1-655-235-11



SE-46 -SOLDERING SIDE-
1-655-231-11



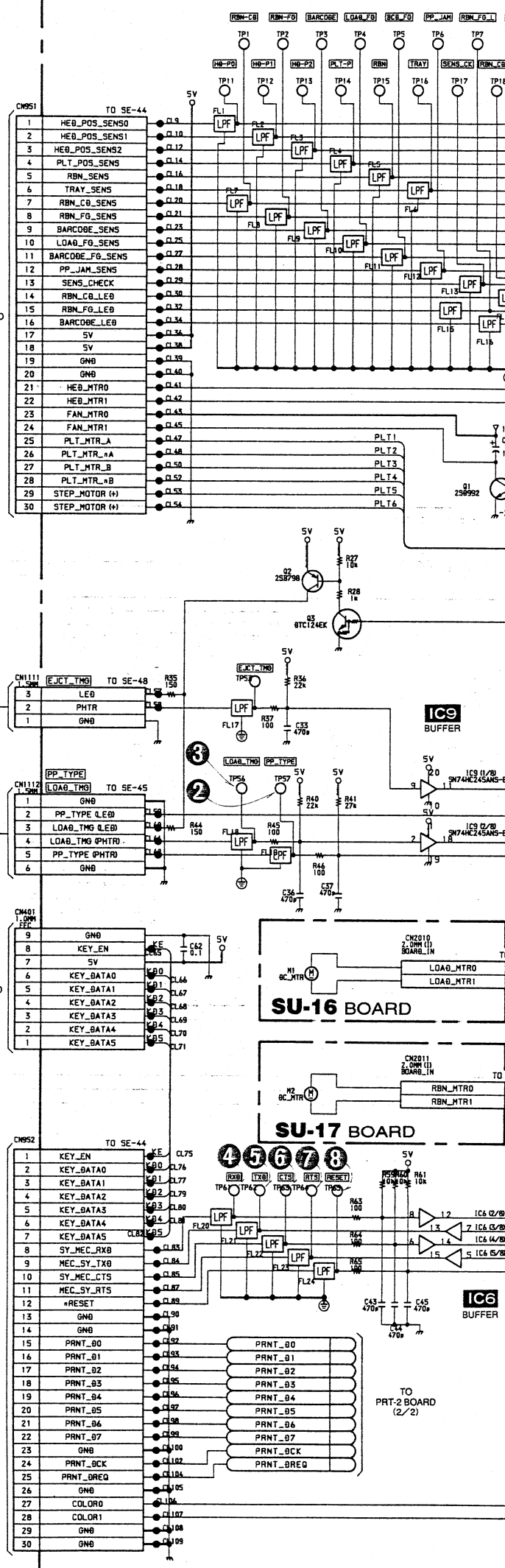
SE-48 -SOLDERING SIDE-
1-655-233-11

MECAH CONTROL	MECAH CONTROL
PRT-2	**PRT-2**

1 2 3 4 5 6 7 8 9 10

A B C D E F G H I J K L M N

PRT-2 (1/2) BOARD



PRT-2 (1/2) BOARD

❶ During platen rotation 5V p-p TP72 — TP75	❻ 3V p-p TP63 CTS	⓫ 2.1V p-p 20MHz TP55 XTAL
❷ During print 0.2V p-p TP57	❼ 0.8V p-p TP64 RTS	⓬ 0.3V p-p TP51 HEAD.TMP
❸ During print 0.15V p-p TP56	❽ 0.2V p-p TP65 RESET	⓭ 0.4V p-p TP54
❹ During print 0.9V p-p TP61 RXD	❾ During ribbon motor driving 4.8V p-p TP60 RBN. MTR	
❺ 3V p-p TP62 TXD	❿ During load motor driving 4.4V p-p H TP57 LOAD. MTR	

(EJECT TMG SENSOR) SU-16 (LOAD MOTOR) SU-17 (RIBBON MOTOR)

8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19

(1/2) BOARD

IC1 BUFFER

IC2 AND

IC6 BUFFER

IC9 BUFFER

IC11 MOTOR DRIVER

IC10 INV.

IC9 BUFFER

IC13 CPU

IC15

IC10 INV.

IC17

IC18 MOTOR DRIVER

IC16

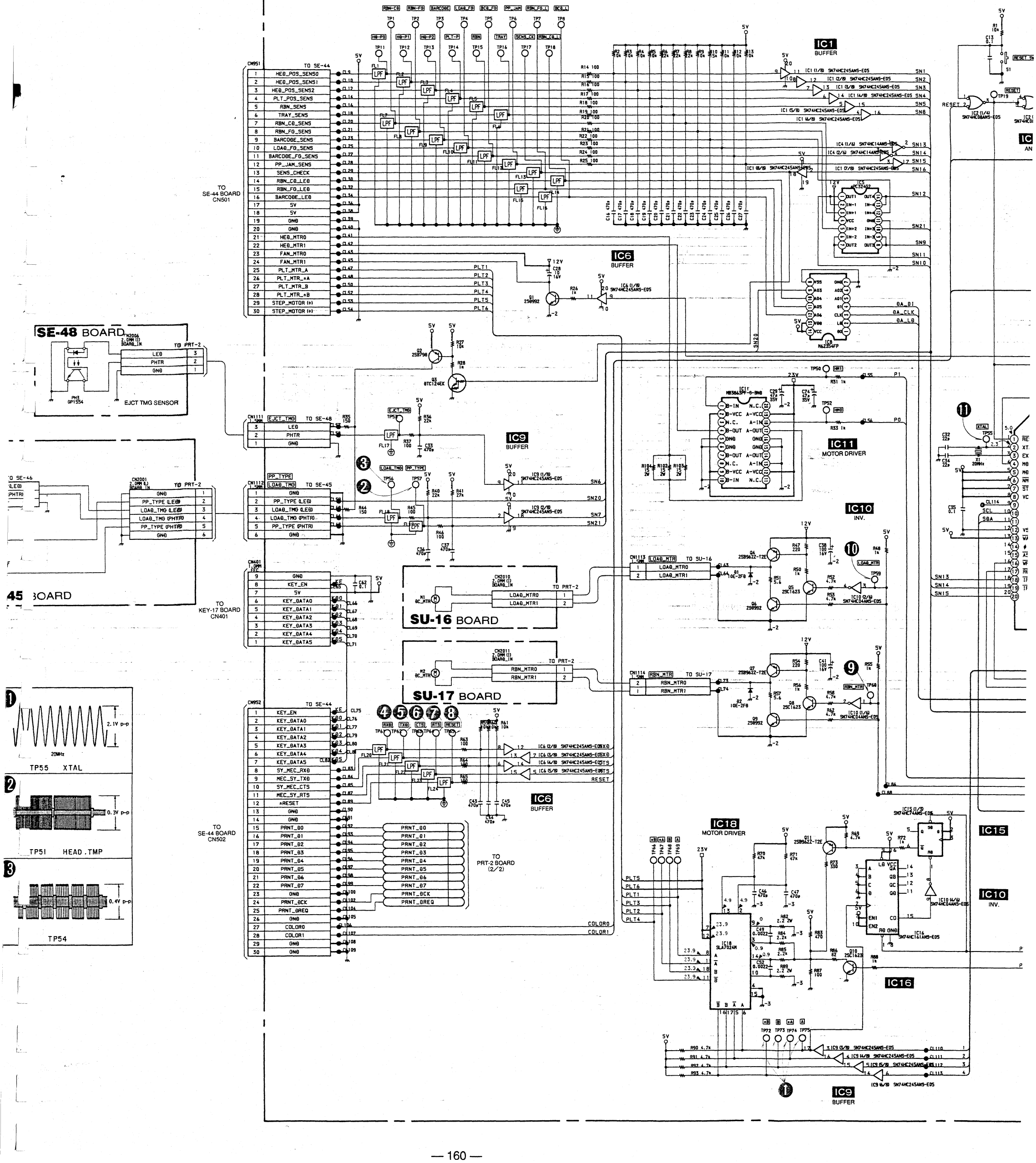
IC9 BUFFER

SU-16 BOARD

SU-17 BOARD

TO PRT-2 BOARD (2/2)

PRT-2 (1/2) BOARD



17 18 19 20 21 22 23 24 25 26

TO PRT-2 BOARD (2/2)

TO POWER SUPPLY CN501

CN001 TO POWER REØ

STEP MOTER (+)	1
STEP MOTER (+)	2
STEP MOTOR GNØ	3
STEP MOTOR GNØ	4
V CONT	5
V CONT GNØ	6
MOTOR (+)	7
MOTOR GNØ	8
5V	9
GNØ	10
HEAØ V	11
HØ GNØ	12
N.C.	13

IC9 BUFFER

IC13 CPU

IC14

IC7 PROGRAM ROM

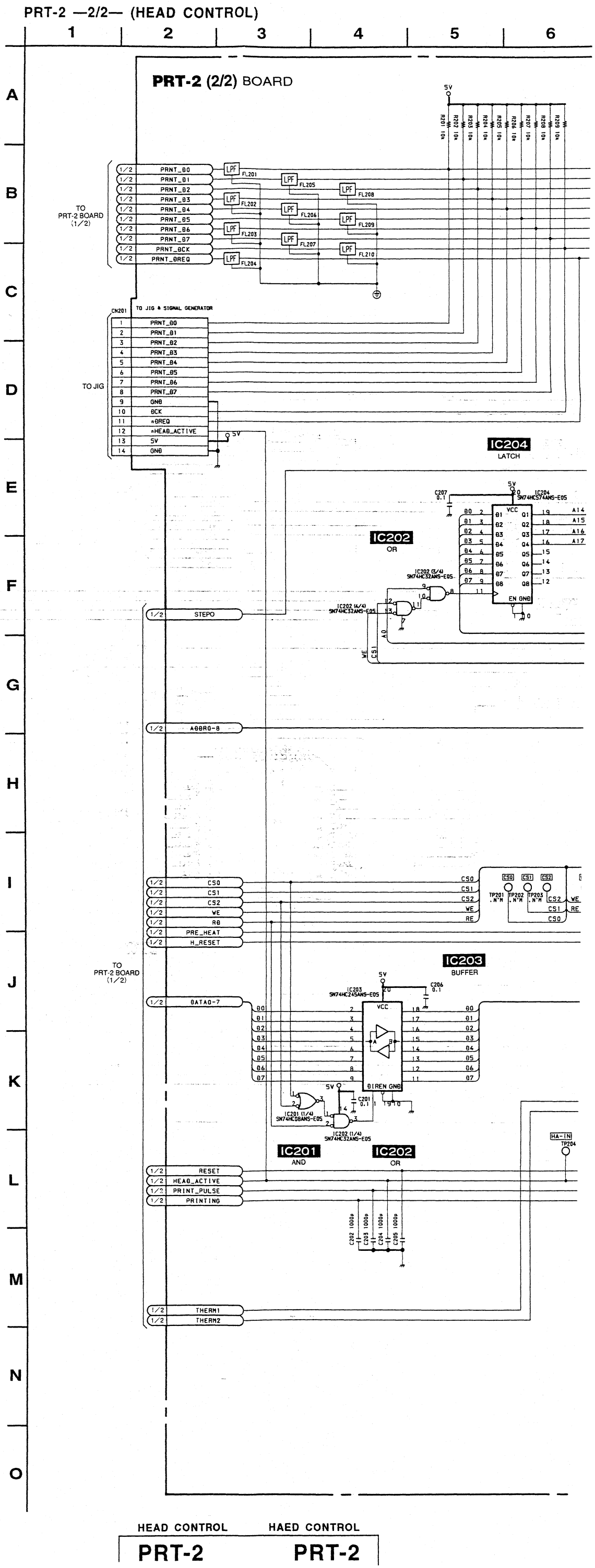
IC12 OP AMP

IC17

— 161 —

— 162 —

PRT-2 —2/2— (HEAD CONTROL)



HEAD CONTROL HAED CONTROL

PRT-2 **PRT-2**

IC205
BUFFER

IC206
Y-ROM

IC207
PICTURE QUALITY CONTROL

IC207
CX88909Q

IC208
THERMAL HEAD DRIVE

IC208
CX88862Q

IC201
AND

IC202
OR

IC209
NOR

TO PRT-2 BOARD (1/2)

STEP1	1/2
COLOR0	1/2
COLOR1	1/2
RBN1	1/2
RBN0	1/2

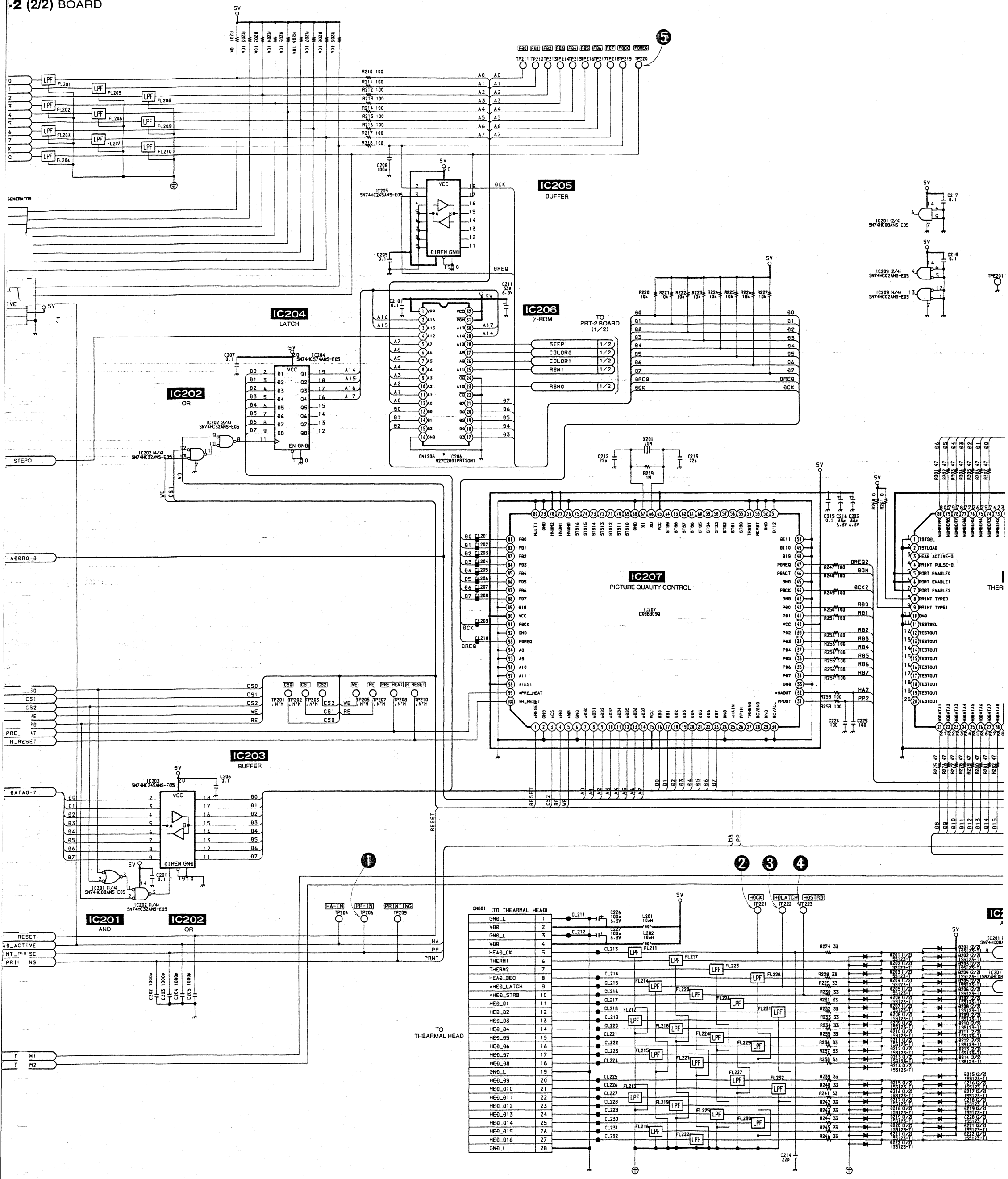
TO THEARMAL HEAD

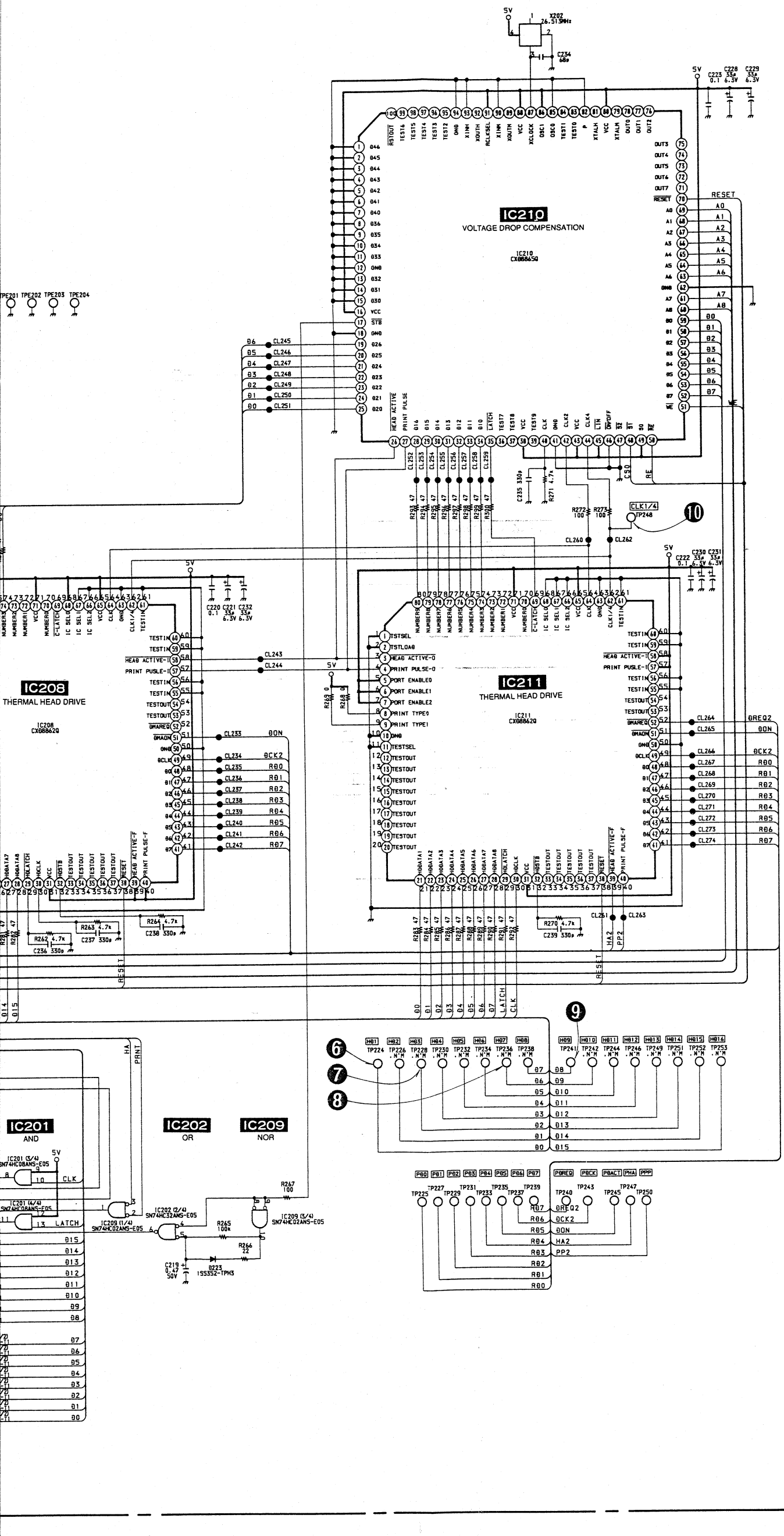
CN801 (TO THEARMAL HEAD)

GNDH_L	1
VDD	2
GNDH_L	3
VDD	4
HEAD_CK	5
THERM1	6
THERM2	7
HEAD_BEO	8
nHEAD_LATCH	9
nHEAD_STRB	10
HEAD_01	11
HEAD_02	12
HEAD_03	13
HEAD_04	14
HEAD_05	15
HEAD_06	16
HEAD_07	17
HEAD_08	18
GNDH_L	19
HEAD_09	20
HEAD_010	21
HEAD_011	22
HEAD_012	23
HEAD_013	24
HEAD_014	25
HEAD_015	26
HEAD_016	27
GNDH_L	28

3 4 5 6 7 8 9 10 11 12 13 14

-2 (2/2) BOARD



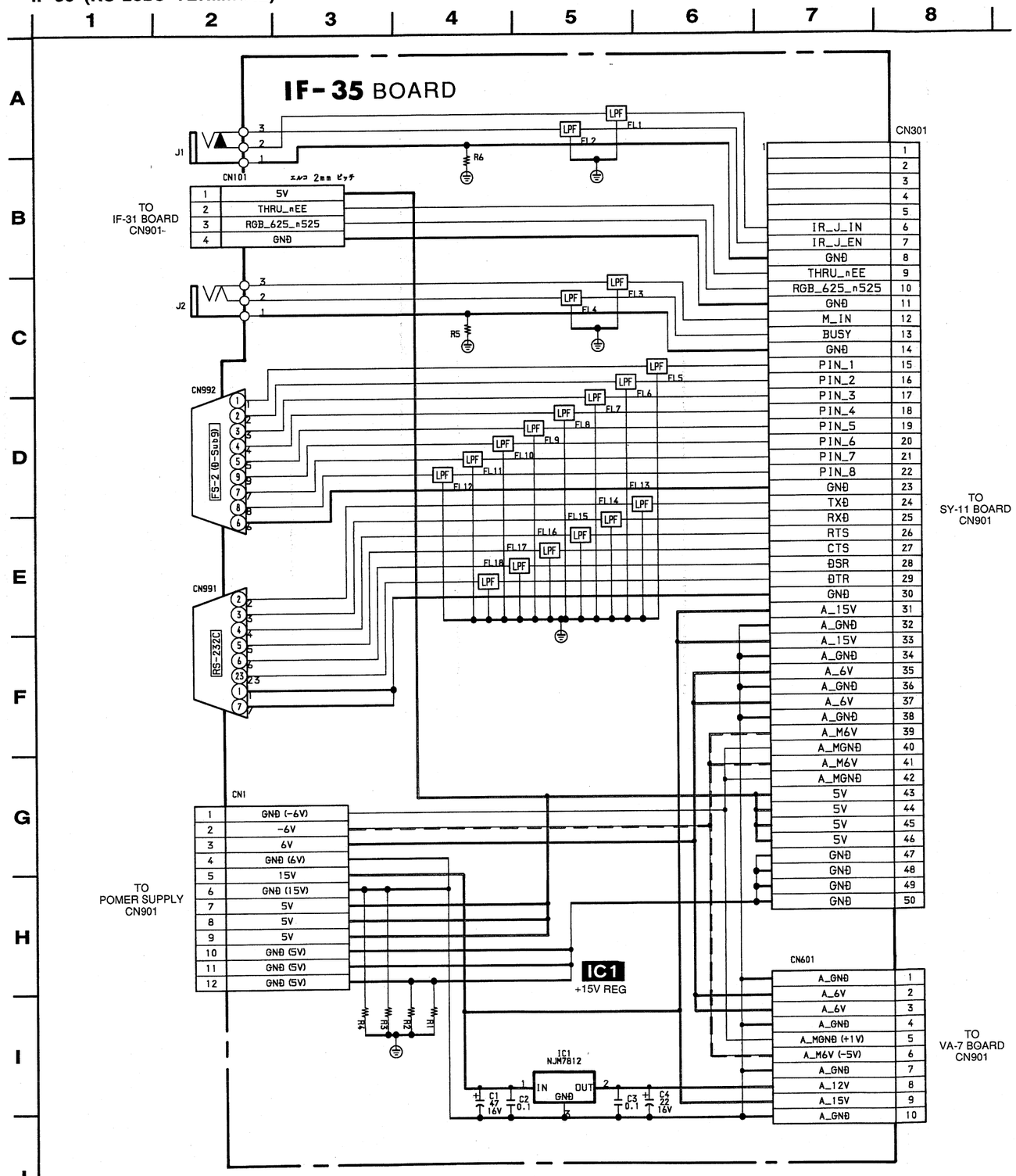


PRT-2 (2/2) BOARD

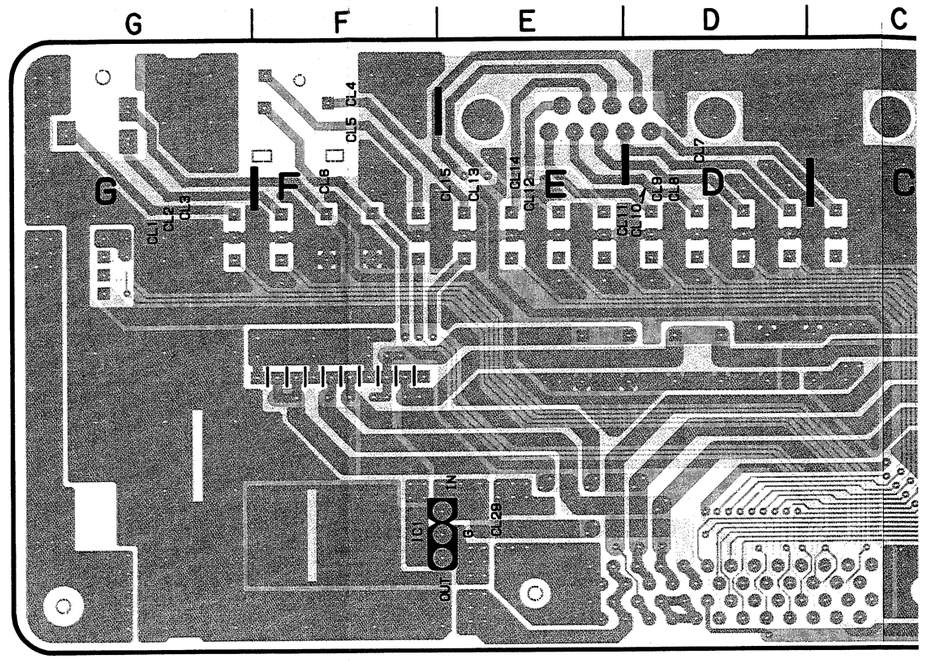
HEAD CONTROL HEAD CONTROL

PRT-2 **PRT-2**

IF-35 (RS-232C TERMINAL)

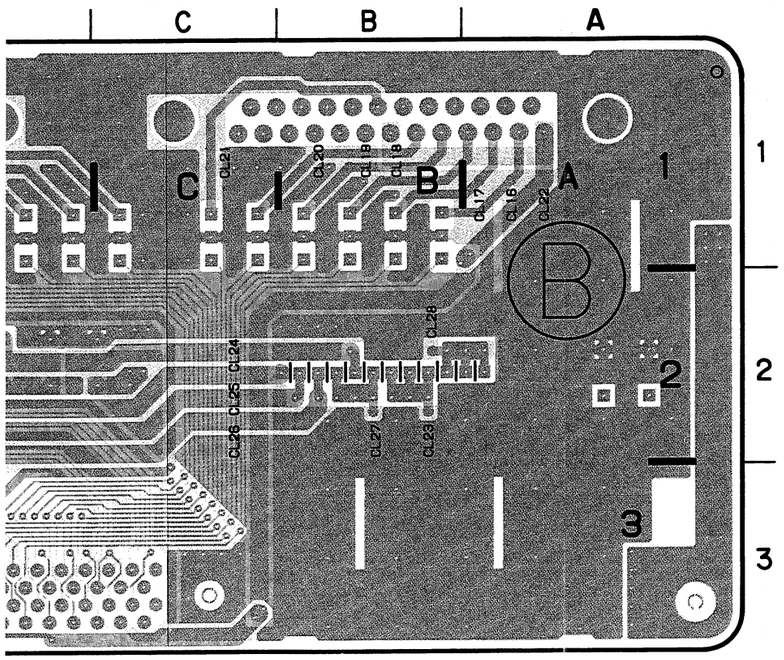


IF-35 (RS-232C TERMINAL)

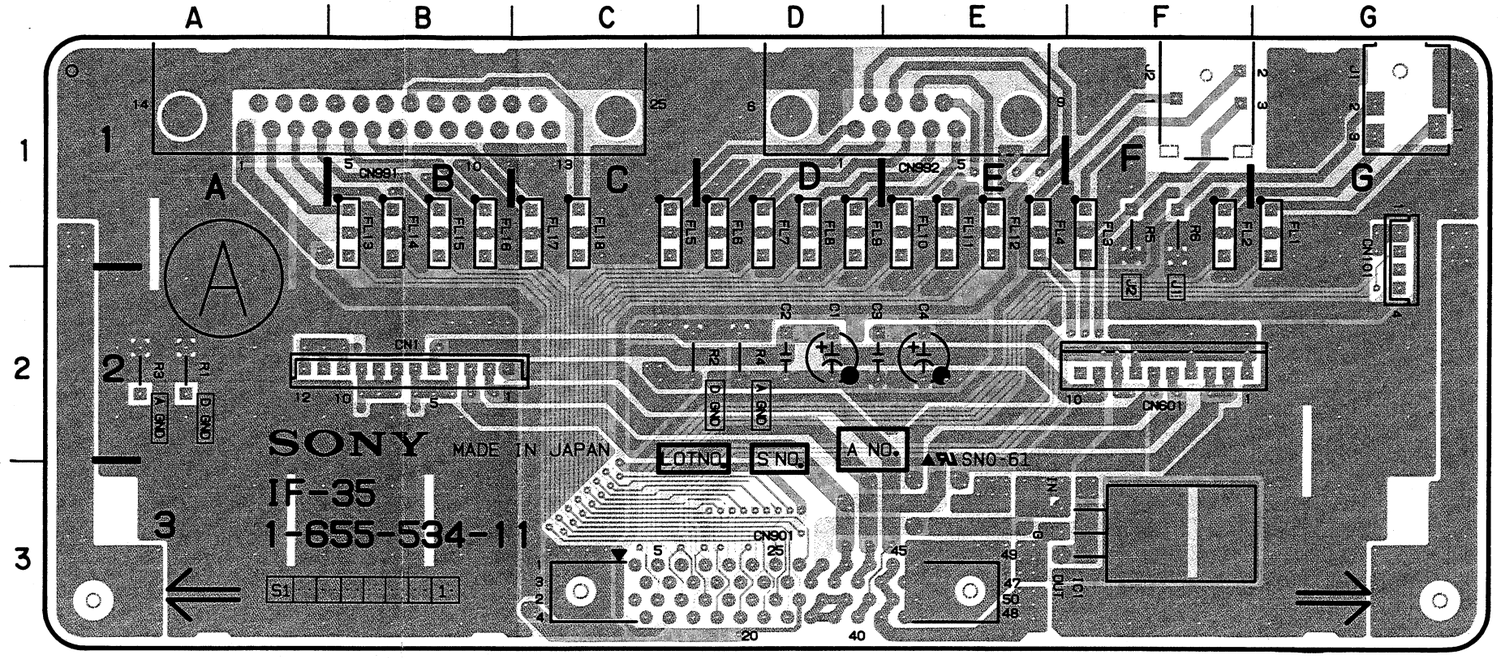


IF-35 BOARD

CN1	C-2
CN101	G-1
CN601	G-2
CN901	C-3
CN991	A-1
CN992	D-1
FL1	G-1
FL2	F-1
FL3	F-1
FL4	E-1
FL5	C-1
FL6	D-1
FL7	D-1
FL8	D-1
FL9	D-1
FL10	E-1
FL11	E-1
FL12	E-1
FL13	B-1
FL14	B-1
FL15	B-1
FL16	B-1
FL17	C-1
FL18	C-1
IC1	F-3
J1	G-1
J2	F-1

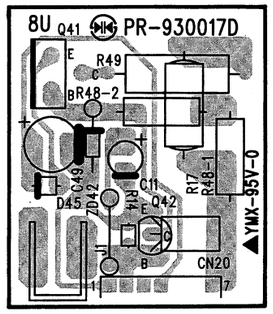


IF-35 -SOLDERING SIDE-
1-655-534-11

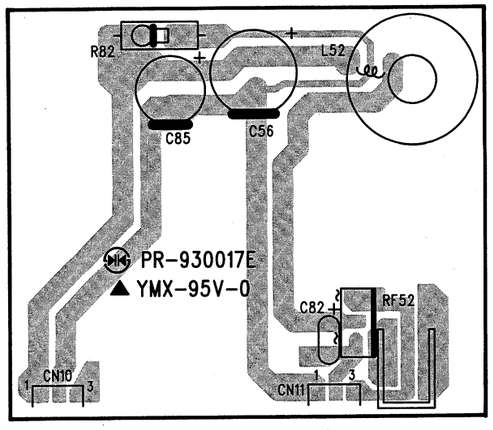


IF-35 -COMPONENT SIDE-
1-655-534-11

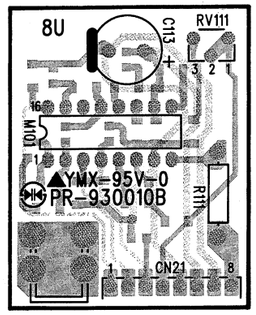
SWITCHING REGULATOR



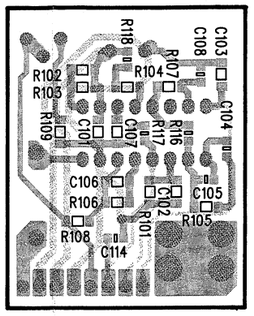
PR-930017D -COMPONENT SIDE-



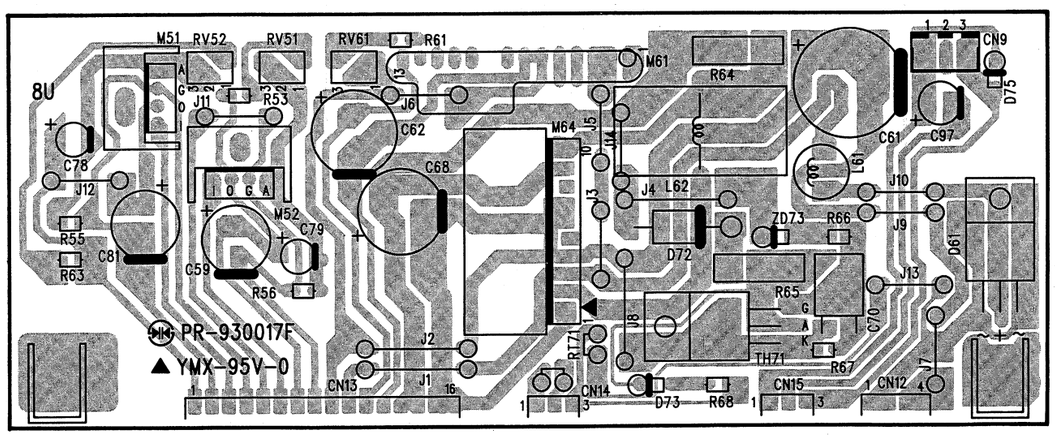
PR-930017E -COMPONENT SIDE-



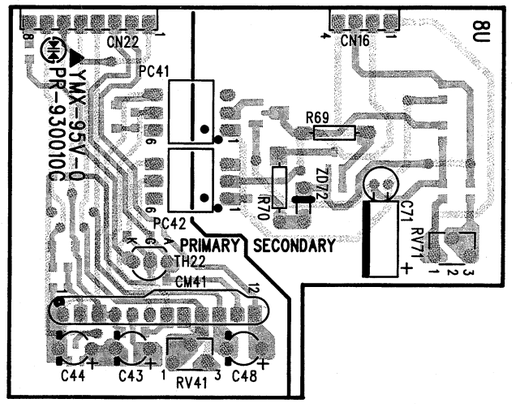
PR-930010B -COMPONENT SIDE-



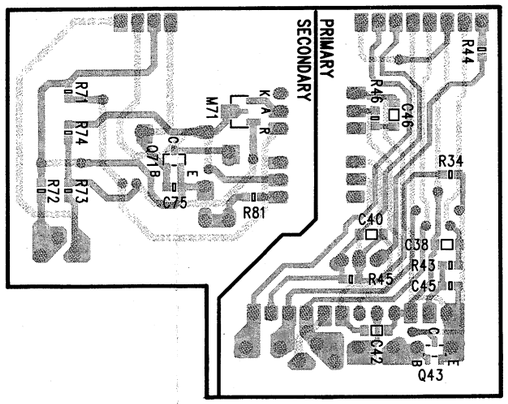
PR-930010B -SOLDERING SIDE-



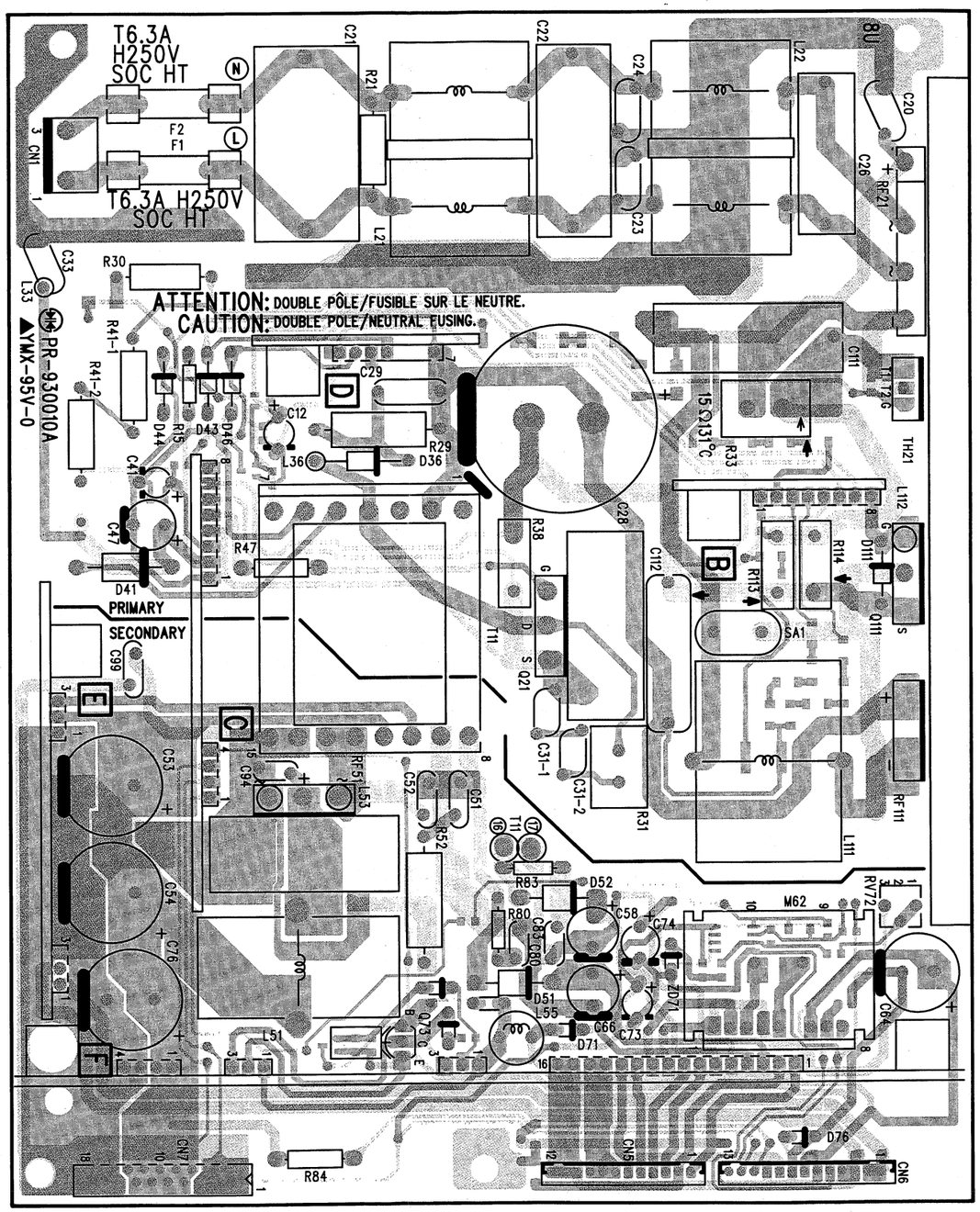
PR-930017F -COMPONENT SIDE-



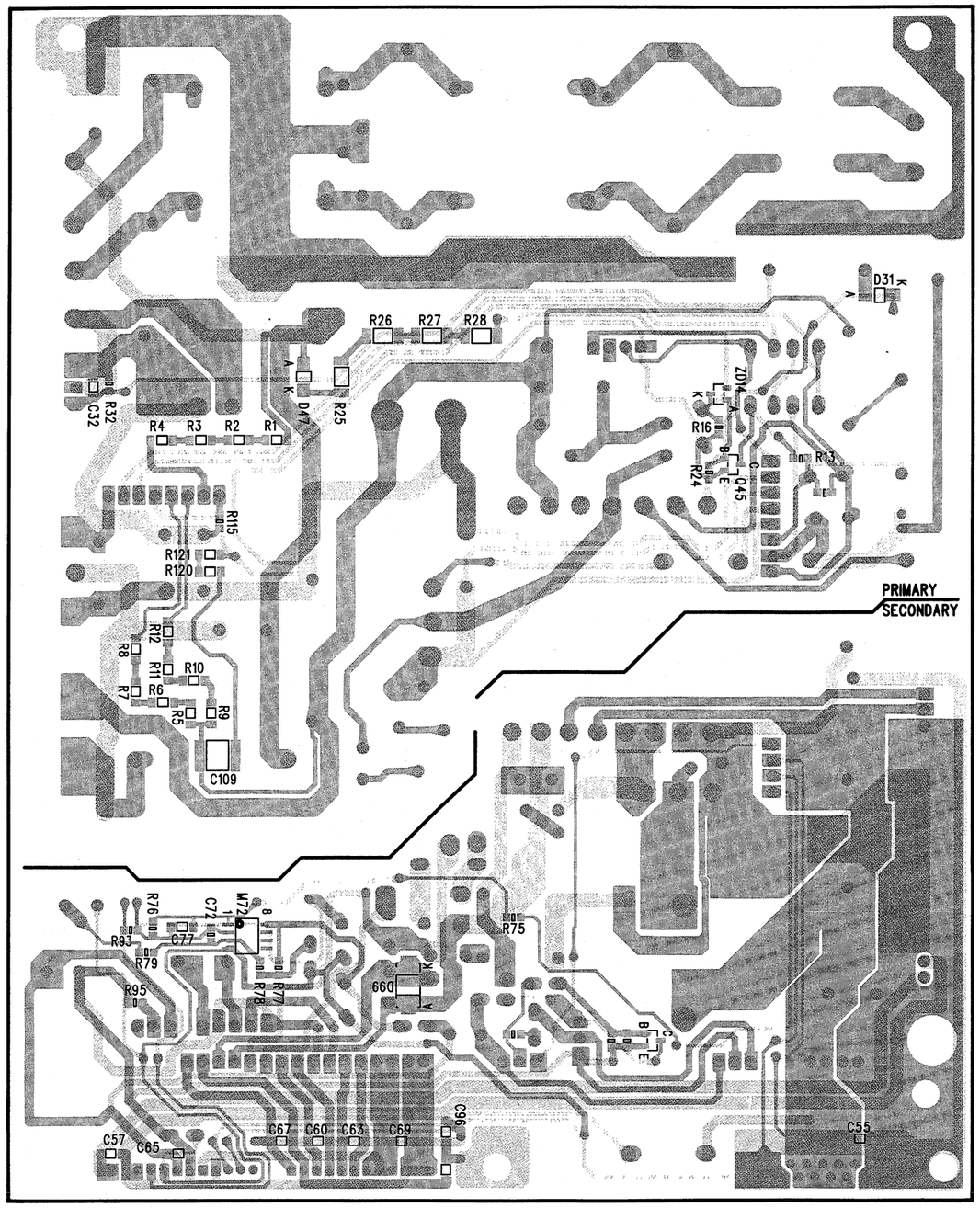
PR-930010C -COMPONENT SIDE-



PR-930010C -SOLDERING SIDE-

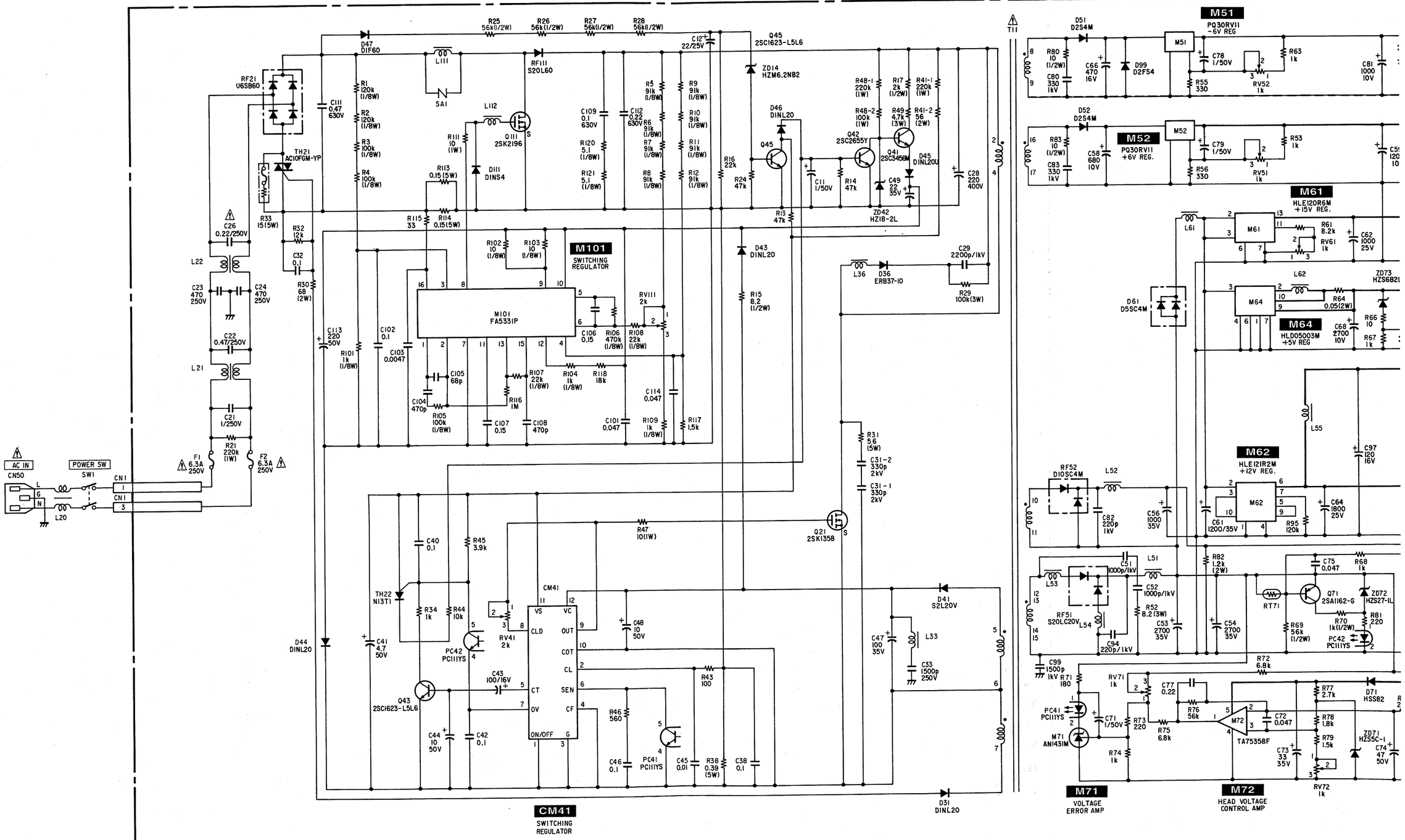


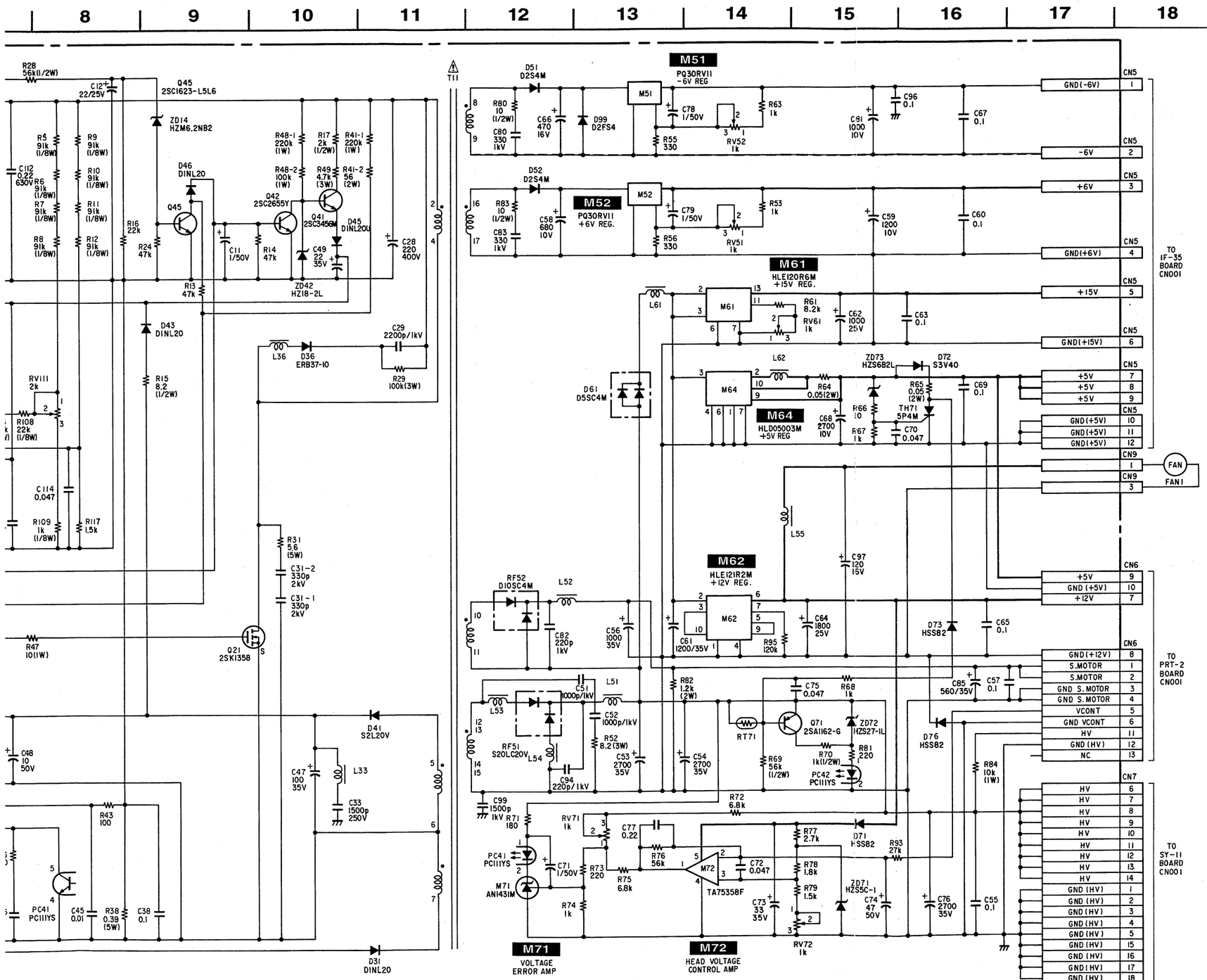
PR-930010A -COMPONENT SIDE-



PR-930010A -SOLDERING SIDE-

SWITCHING REGULATOR




8
9
10
11
12
13
14
15
16
17
18
M51
PQ30RVII
-6V REG
M52
PQ30RVII
+6V REG.
M61
HLE120R6M
+15V REG.
M64
HLD05003M
+5V REG
M62
HLE121R2M
+12V REG.
M71
VOLTAGE
ERROR AMP
M72
HEAD VOLTAGE
CONTROL AMP
TA75358F
CN5
GND(-6V)
-6V
+6V
GND(+6V)
+15V
GND(+15V)
+5V
GND(+5V)
CN9
FAN
FAN1
CN6
+12V
GND(+12V)
S.MOTOR
GND S.MOTOR
VCONT
GND VCONT
HV
GND(HV)
NC
CN7
TO IF-35 BOARD CN001
TO PRT-2 BOARD CN001
TO SY-11 BOARD CN001
POWER SUPPLY

4-3. SEMICONDUCTORS

The chart in this section may sometimes show diodes, transistors, and ICs that are not interchangeable. When replacing a component, be sure to refer to the parts list. The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

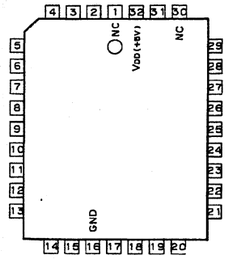
TYPE	PAGE
02DZ7.5-TPH3	207
10E-2	207
1S2837	207
1SS226	207
1SS352	207
1T362A	207
2SA1226	207
2SA1162	207
2SA812-M5	207
2SB798-DK	207
2SB962Z-E	207
2SC1623	207
2SC1623-L6	207
2SC2655Y	207
2SC3456M	207
2SC3735-L-B35	207
2SD992-Z	207
2SD999-CLCK	207
5P4M	207
AM29F010-120JC	180
BA7606F	180
CXA1211M	180
CXA1213AS	181
CXA1437Q	181
CXA1645M	182
CXA1686M	182
CXD1176Q	183
CXD1178Q	183
CXD1217Q	184
CXD8862Q	185
CXD8865R	185
CXD8868Q	186
CXD8869Q	186
CXD8909Q	186
CXD8911Q	187
CXD8931Q	188
CXD8932Q	188
CXK1206AM	189
D10SC4M	208
D1F60	208
D1NL20	207
D1NS4	207
D2FS4	207
D2S4M	207
D5SC4M	207
DS1000Z-50	189
DS1000Z-75	189
DTA124EK	207
DTC124EK	207
DTC143TK	207
DTC144EK	207
ERB37-10	207
GL480	207
GL514	207
GP1S51	208
GP1S54	208
GP2S40K	208
HD6435328RA00F	190
HD6473042F12	191
HD647338F10	192
HLD05003M	193
HLE120R6M	193
HLE121R2M	193
HM5117400AS7GS	193
HM514400BS7GS	194
HN58C66SFP25TZ	194
HZ ? ?	208
HZM ? ? NB ?	208
HZS ? ? L	208
HZS ? ? C-1	208
LM1201MX	195
LM358PS	195
LM393PS	195
M27C2001-15F1	195
M62354P	196
M62359FP	196
MAX211CAI	197
MB3863PF-G-BND	197
MB89371APF	198
MC141625AFU	199
MC14576CF	199
MC74F04M	199
MC74F257AMEL	200
MC74F74M	200
MC74HC4053F	200
MC74HC4538AF	200
MX23C2000-MS00	200
MX23C8000-MM00	201
MX27C512DC-12	201
N13T1	207
NJM2230M	201
NJM2233BM	201
NJM7812FA	201
NJM78L09UA	202
NJM78L12UA	202
PC111YS	207
PQ05SZ1U	202
PQ30RV11	202
PST572CMT	202
PT480F	207
PT501	207
RD9.1M-B1	208
RPI-5100	208
S20L60	208
S20LC20U	208
S2L20U	208
S3V40	207
SLA7024M	202
SN74HC02ANS	202
SN74HC04ANS	202
SN74HC08ANS	203
SN74HC138ANS	203
SN74HC14ANS	203
SN74HC161ANS	204
SN74HC21ANS	203
SN74HC245ANS	204
SN74HC253ANS	204
SN74HC257ANS	204
SN74HC32ANS	203
SN74HC574ANS	204
SN74HC74ANS	203
ST24C01M1	205
TA75358F	205
TC4W53F	205
TC7S66F	205
TC7W00F	205
TC7W08F	205
U6SB60	207
UPC324G2	205
UPD6461GS-701-GLG	206
UPD71055GB-3B4	206
XN1501	207
XN2401	207
XN2501	207
XN4501	207
XN4601	207

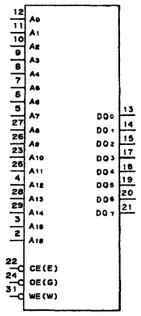
SP0017 / Druck 31

TYPE	PAGE
SN74HC74ANS	203
ST24C01M1	205
TA75358F	205
TC4W53F	205
TC7S66F	205
TC7W00F	205
TC7W08F	205
U6SB60	207
UPC324G2	205
UPD6461GS-701-GLG	206
UPD71055GB-3B4	206
XN1501	207
XN2401	207
XN2501	207
XN4501	207
XN4601	207

AM29F010-120JC (AMD)

C-MOS 1M(131072 x 8)-BIT FLASH EEPROM
—TOP VIEW—





(V_{DD} = + 5 V)

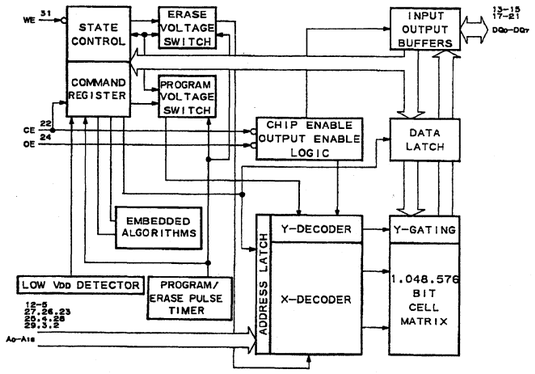
PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	–	NC	17	I/O	DQ3
2	I	A16	18	I/O	DQ4
3	I	A15	19	I/O	DQ5
4	I	A12	20	I/O	DQ6
5	I	A7	21	I/O	DQ7
6	I	A6	22	I	$\overline{CE}$ (E)
7	I	A5	23	I	A10
8	I	A4	24	I	$\overline{OE}$ (G)
9	I	A3	25	I	A11
10	I	A2	26	I	A9
11	I	A1	27	I	A8
12	I	A0	28	I	A13
13	I/O	DQ0	29	I	A14
14	I/O	DQ1	30	–	NC
15	I/O	DQ2	31	I	$\overline{WE}$ (W)
16	–	GND	32	–	V_{DD}

INPUT
A0 – A16 ; ADDRESS (0 – 16)
CE ; CHIP ENABLE
OE ; OUTPUT ENABLE
WE ; WRITE ENABLE

OUTPUT
DQ0 – DQ7 ; DATA (0 – 7)

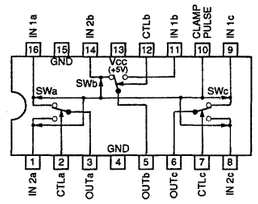
OPERATION	$\overline{CE}$	$\overline{OE}$	$\overline{WE}$	A0	A1	A9	I/O
AUTO-SELECT MANUFACTURER CODE (1)	0	0	1	0	0	VID	CODE
AUTO-SELECT DEVICE CODE (1)	0	0	1	1	0	VID	CODE
READ	0	0	1	A0	A1	A9	DOUT
STANDBY	1	X	X	X	X	X	HI-Z
OUTPUT DISABLE	0	1	1	X	X	X	HI-Z
WRITE	0	1	0	A0	A1	A9	DIN(2)
ENABLE SECTOR PROTECT	0	VID	0	X	X	VID	X
VERIFY SECTOR PROTECT (3)	0	0	1	0	1	VID	CODE

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z: HIGH IMPEDANCE



BA7606F (ROHM)

3-INPUT VIDEO SWITCH FOR VTR
—TOP VIEW—



CLT	OUT
0	IN 2
1	IN 1

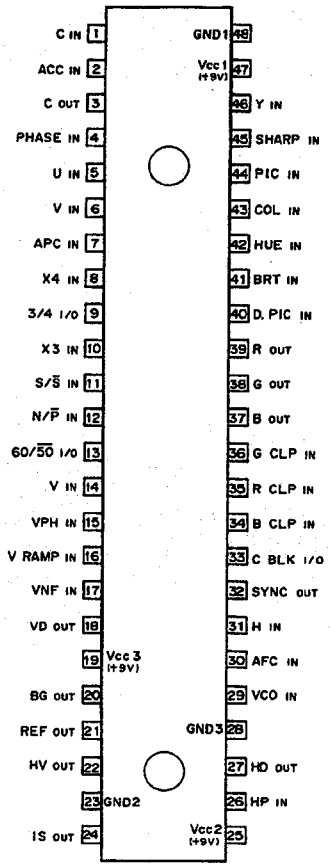
0 ; LOW LEVEL
1 ; HIGH LEVEL

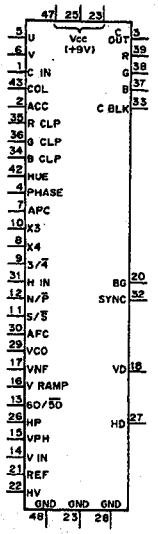
CXA1211M (SONY)

ELECTORONIC VOLUME
—TOP VIEW—

CXA1213AS (SONY)

PAL/NTSC COLOR DECORDER
—TOP VIEW—

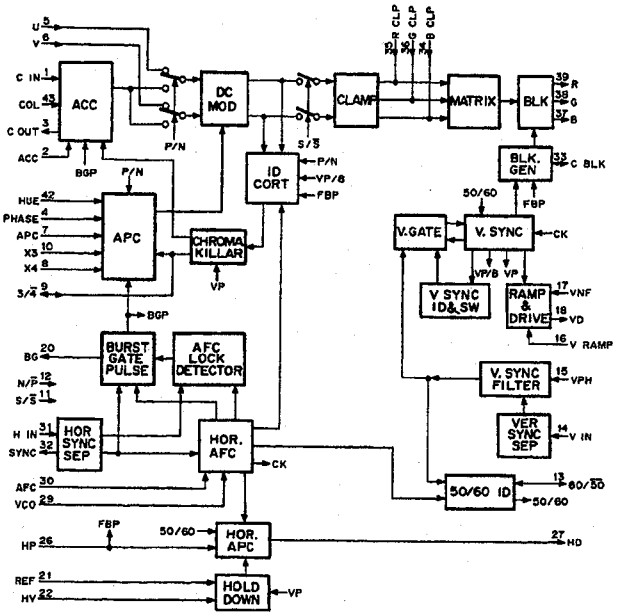




INPUT
ACC ; AUTO CHROMA CONTROL
AFC ; AFC LOOP FILTER
APC ; LAG LEAD FILTER
B CLP ; B-Y SIGNAL COLOR CLAMP OR SECAM B-Y SIGNAL IN
BRT ; BRIGHT CONTROL VOLTAGE
C IN ; CHROMA IN
COL ; COLOR CONTROL VOLTAGE
D. PIC ; NEW DYNAMIC PICTURE BLACK PEAK HOLD
G CLP ; G-Y SIGNAL COLOR CLAMP OUTPUT
H IN ; HSYNC SEPARATOR
HP ; FBP INPUT
HUE ; NTSC HUE CONTROL VOLTAGE INPUT
N/P̄ ; NTSC/PAL
PHASE ; PAL PHASE CONTROL
PIC ; PICTURE CONTROL VOLTAGE
R CLP ; R-Y SIGNAL COLOR CLAMP OR SECAM R-Y SIGNAL IN
SHARP ; SHARPNESS CONTROL VOLTAGE
S/S̄ ; SECAM/SECAM
U ; U SIGNAL
V ; V SIGNAL
VCO ; OSCILLATING ELEMENT CONNECT
V IN ; VERTICAL SYNC SEPARATOR
VNF ; VERTICAL DEFLECTION FEEDBACK
VPH ; V SYNC SLICE LEVEL DETECT
V RAMP; VERTICAL DEFLECTION SAWTOOTH WAVEFORM GENERATE
X3 ; CHROMA VCO CRYSTAL (4.43MHz)
X4 ; CHROMA VCO CRYSTAL (4.43MHz)
Y IN ; Y SIGNAL INPUT

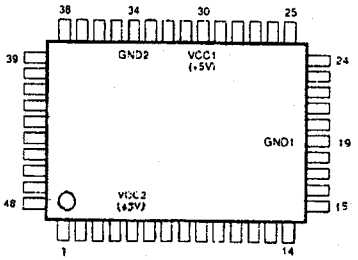
OUTPUT
BG ; GATE PULSE
B OUT ; B SIGNAL
C OUT ; CHROMA OUT
G OUT ; G SIGNAL
HD ; HORIZONTAL DRIVE
HV ; OVERVOLTAGE DETECT
IS ; REFERENCE CURRENT GENERATE
REF ; REFERENCE VOLTAGE
R OUT ; R SIGNAL
SYNC ; SYNC WAVEFORM FORMATION
VD ; FEEDBACK WAVEFORM OR SAWTOOTH WAVEFORM COMPARATOR

INPUT/OUUTPUT
3/4 ; VCO OSCILLATE FREQUENCY DISCRIMINATOR INPUT (3.58MHz) /OUTPUT (4.43MHz)
60/50 ; VERTICAL FREQUENCY 50Hz/60Hz DISCRIMINATOR INPUT (60Hz) /OUTPUT (50Hz)
C BLK ; C BLANKING INPUT OR BLANKING SIGNAL INPUT



CXA1437Q

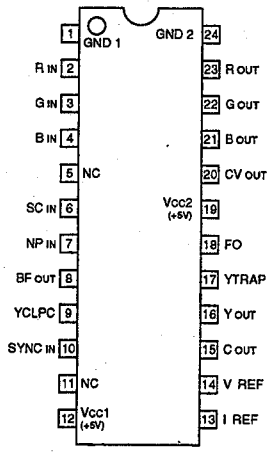
ELECTORONIC VOLUME
—TOP VIEW—

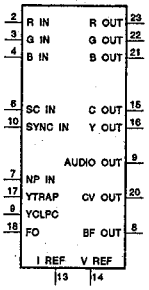


PIN No.	SIGNAL	PIN No	SIGNAL	PIN No	SIGNAL	PIN No	SIGNAL
1	N.C	13	N.C	25	N.C	37	SYNC SEP TC*
2	N.C	14	N.C	26	N.C	38	N.C
3	HD TC	15	VD OUT	27	N.C	39	SYNC SEP TC2
4	HD OUT	16	ID OUT	28	SW OUT	40	L. C SYNC OUT
5	VCC2(+5V)	17	ID S/H	29	AGC REF	41	PB/REC IN
6	N.C	18	ID IN	30	VCC*(+5V)	42	FSC IN
7	I REF	19	GND*	31	REC Y IN	43	N.C
8	VD TC	20	AGC OUT	32	PEAK AGC HOLD	44	N.C
9	BFP OUT	21	AGC DET IN	33	N.C	45	NTSC/PAL IN
10	BFP TC	22	N.C	34	GND2	46	N.C
11	N.C	23	SYNC AGC HOLD	35	PB Y IN	47	L.ALT OUT
12	N.C	24	N.C	36		48	BLK OUT

CXA1645M (SONY)

RGB COMPOSITE ENCODER
—TOP VIEW—

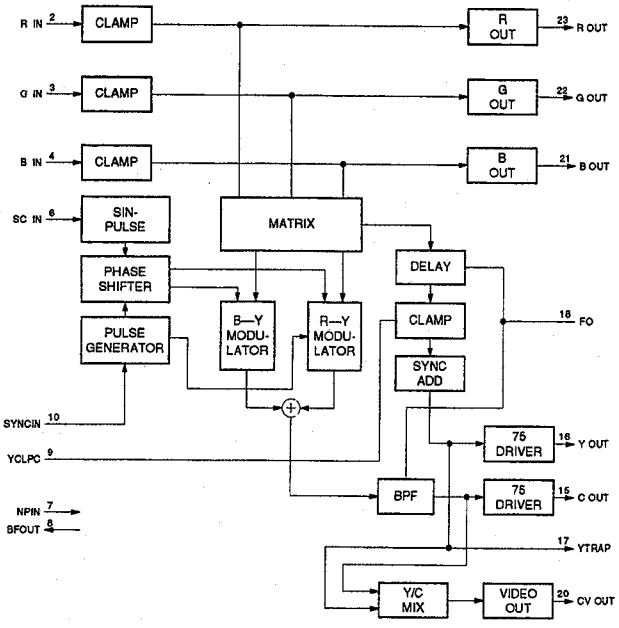




INPUT
B IN ; ANALOG B
G IN ; ANALOG G
NP IN ; NTSC/PAL MODE SELECT
R IN ; ANALOG R
SC IN ; SUB-CARRIER
SYNC IN ; COMPOSITE SYNC SIGNAL

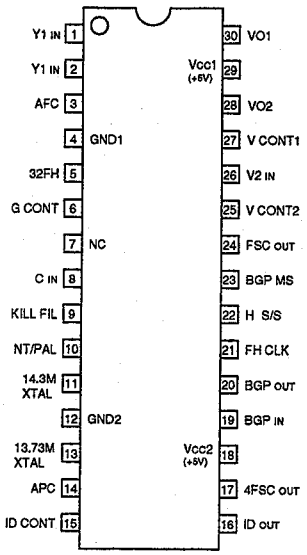
OUTPUT
B OUT ; ANALOG B
BF OUT ; BF PULSE FOR MONITOR
C OUT ; CHROMA SIGNAL
CV OUT ; COMPOSITE VIDEO
G OUT ; ANALOG G
R OUT ; ANALOG R
Y OUT ; Y SIGNAL

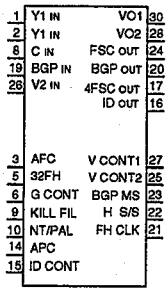
OTHER
FO ; fo ADJUST FOR INNER FILTER
IREF ; REFFERENCE CURRENT
VREF ; REFFERENCE VOLTAGE
YCLPC ; Y SIGNAL CLAMP CAPACITOR
YTRAP ; Y SIGNAL CROSS-COLOR TRAP



CXA1686M (SONY)

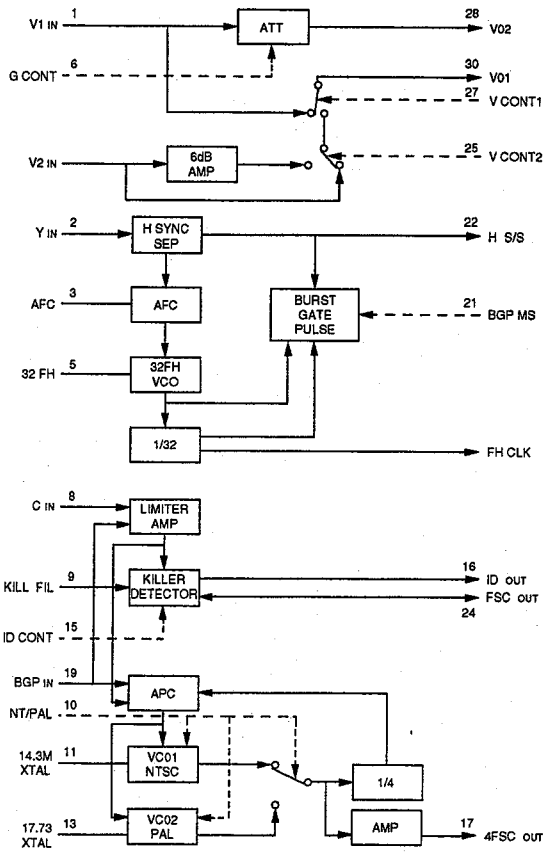
4FSC CLOCK GENERATOR
—TOP VIEW—





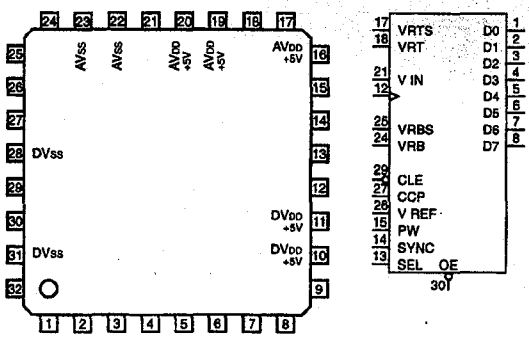
INPUT
V1 IN ; VIDEO INPUT
Y IN ; Y INPUT
C IN ; CHROMA INPUT
BGP IN ; BURST GATE PULSE INPUT
V2 IN ; VIDEO 2 INPUT

OUTPUT
ID OUT ; KILLER ID DISTINCTION OUTPUT
BGP OUT ; BURST GATE PULSE OUTPUT
FH CLK ; FH CLOCK OUTPUT
H S/S ; H SYNC SEP OUTPUT
FSC OUT ; NTSC/PAL FSC CLOCK OUTPUT
VO2 ; VIDEO 2 OUTPUT
VO1 ; VIDEO 1 OUTPUT



CXD1176Q (SONY)

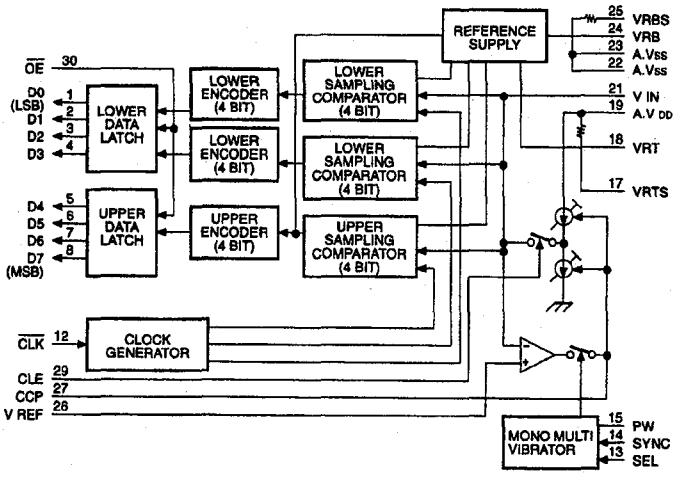
C-MOS 8-BIT 20MSPS VIDEO A/D CONVERTER
—TOP VIEW—



PIN NO	I/O	SIGNAL	PIN NO	I/O	SIGNAL
1	O	D0 (LSB)	17	I	VRTS
2	O	D1	18	I	VRT
3	O	D2	19	–	A.VDD
4	O	D3	20	–	A.VDD
5	O	D4	21	I	V IN
6	O	D5	22	–	A.Vss
7	O	D6	23	–	A.Vss
8	O	D7 (MSB)	24	I	VRB
9	–	NC	25	I	VRBS
10	–	D.VDD	26	I	V REF
11	–	D.VDD	27	I	CCP
12	I	CLK	28	–	D.Vss
13	I	SEL	29	I	CLE
14	I	SYNC	30	I	OE
15	I	PW	31	–	D.Vss
16	–	A.VDD	32	–	NC

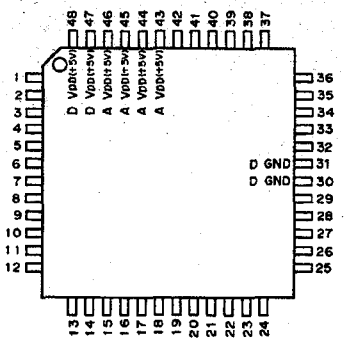
INPUT
CCP : CLAMP CONTROL VOLTAGE FOR INTEGRATOR
CLE : CLAMP ENABLE
CLK : CLOCK
CLP : CLAMP PULSE
OE : OUTPUT ENABLE
PW : PULSE WIDTH FOR MONO MULTI
SEL : TRIGGER SELECT
SYNC : TRIGGER PULSE FOR MONO MULTI VIBRATOR
V IN : ANALOG
VRB : REFERENCE VOLTAGE (BOTTOM)
VRBS : SELF REFERENCE VOLTAGE SHORT (+0.5 V/BOTTOM)
VREF : VOLTAGE REFERENCE FOR CLAMP
VRT : REFERENCE VOLTAGE (TOP)
VRTS : SELF REFERENCE VOLTAGE SHORT (+2.6 V/TOP)

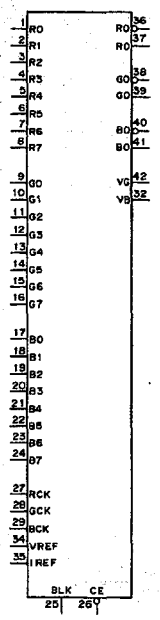
OUTPUT
D0-D7 : DATA



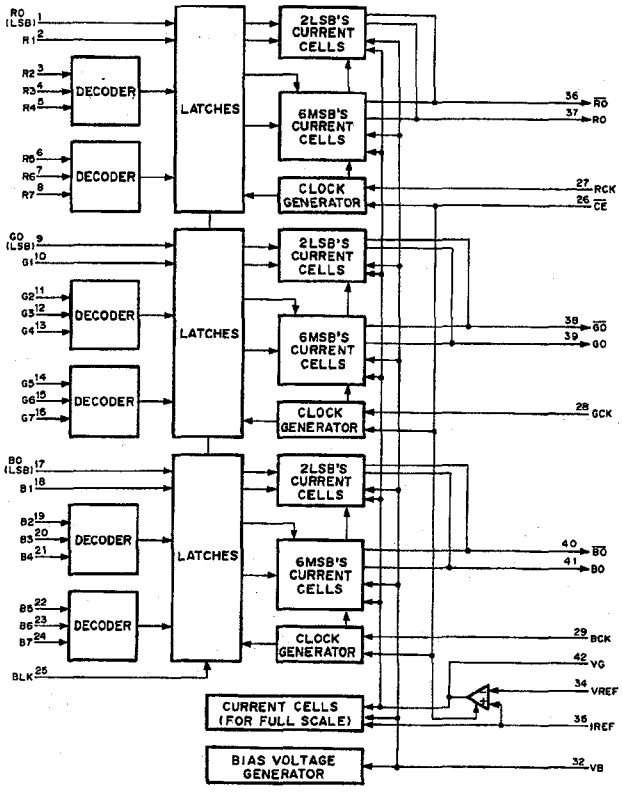
CXD1178Q (SONY) FLAT PACKAGE

C-MOS 3CH 8-BIT 40MHz D/A CONVERTER
—TOP VIEW—



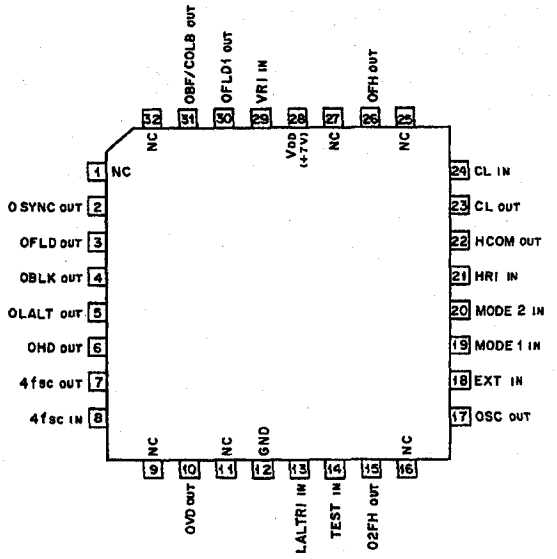


No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL	No.	I/O	SIGNAL
1	I	R0 (LSB)	13	I	G4	25	I	BLK	37	O	RO
2	I	R1	14	I	G5	26	I	CE	38	O	GO
3	I	R2	15	I	G6	27	I	RCK	39	O	GO
4	I	R3	16	I	G7	28	I	GCK	40	O	BO
5	I	R4	17	I	B0 (LSB)	29	I	BCK	41	O	BO
6	I	R5	18	I	B1	30	–	D GND	42	I	VG
7	I	R6	19	I	B2	31	–	D GND	43	–	A VDD
8	I	R7	20	I	B3	32	I	VB	44	–	A VDD
9	I	G0 (LSB)	21	I	B4	33	–	A GND	45	–	A VDD
10	I	G1	22	I	B5	34	I	VREF	46	–	A VDD
11	I	G2	23	I	B6	35	I	IREF	47	–	A VDD
12	I	G3	24	I	B7	36	O	RO	48	–	A VDD



CXD1217Q (SONY) FLAT PACKAGE

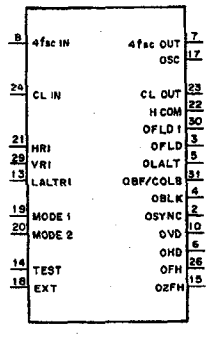
C-MOS SYNC GENERATOR
—TOP VIEW—



SYSTEM	4fsc	CLOCK
NTSC	910f_H	910f_H
PAL	1135f_H + 2f_V	908f_H
PALM	909f_H	910f_H
SECAM	—	908f_H

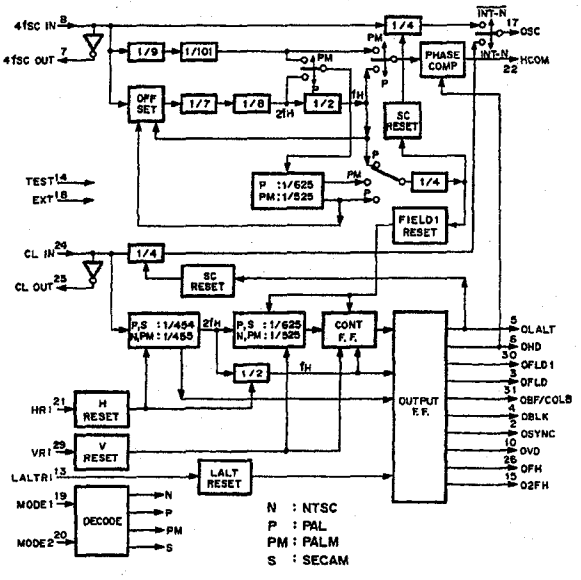
INPUT		SYSTEM
MODE1	MODE2	
0	0	NTSC
0	1	SECAM
1	0	PALM
1	1	PAL

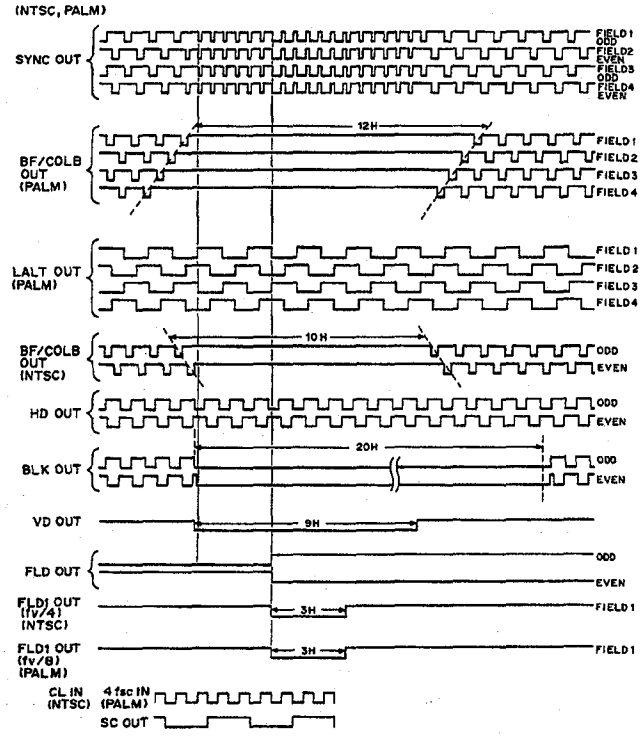
0 ; LOW LEVEL
1 ; HIGH LEVEL

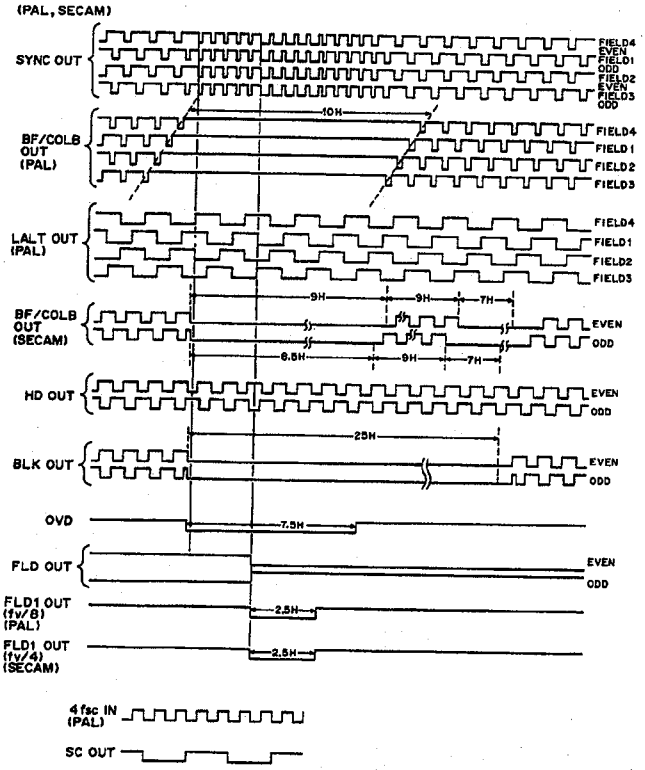


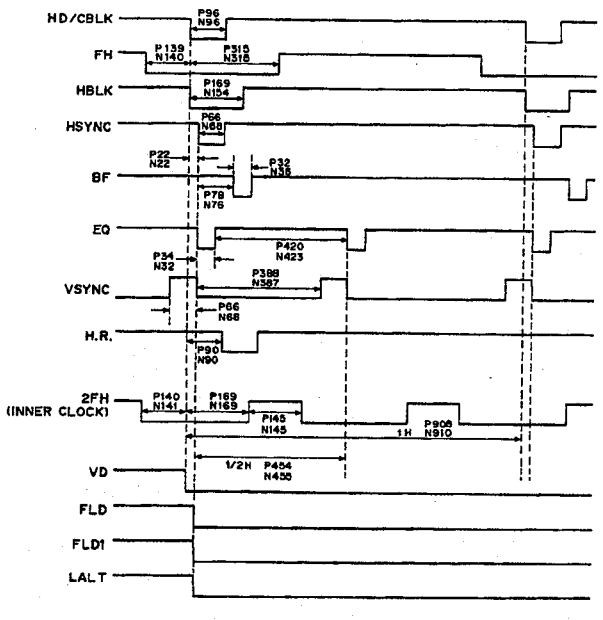
INPUT
4fsc IN ; 4fsc
CL IN ; CLOCK
EXT ; SYNC MODE SELECT
(L : INTERNAL/H : EXTERNAL)
HRI ; HORIZONTAL RESET
LALTRI ; LINE ALTERNATE RESET
MODE1,2 ; SYSTEM SELECT
VRI ; VERTICAL RESET

OUTPUT
4fsc OUT ; 4fsc
CL OUT ; CLOCK
HCOM ; PHASE COMPARATOR
O2FH ; 2f_H
OBF/COLB ; BURST FLAG/COLOR BLANKING
OBLK ; COMPOSITE BLANKING
OFH ; f_H
OFLD ; FIELD PULSE
OFLD1 ; FIELD1
OHD ; HORIZONTAL DRIVE
OLALT ; LINE ALTERNATE
OSC ; SUBCARRIER
OSYNC ; COMPOSITE SYNC
OVD ; VERTICAL DRIVE



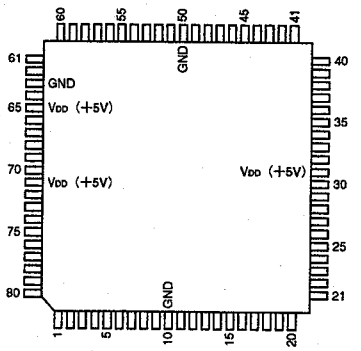






CXD8862Q (HITACHI)

C-MOS GATE ARAY
—TOP VIEW—

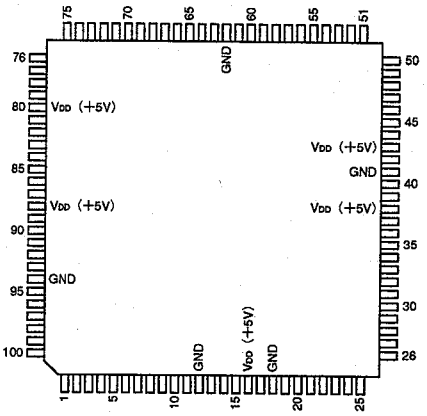


(VDD=+5V)

PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL	PIN No.	I/O	SYMBOL
1	I	TSTSEL	17	O	TSTCOMPA5	33	O	TDATA9	49	I	DCLK	65	—	VDD
2	I	TSTLOAD	18	O	TSTCOMPA6	34	O	TDATA10	50	—	GND	66	I	ICSEL2
3	O	NHEADACTIVE	19	O	TSTCOMPA7	35	O	TDATA11	51	I	NDMAON	67	I	ICSEL1
4	O	PRINTPULSE	20	O	TDATA8	36	O	TDATA12	52	O	NDMAREQ	68	I	ICSEL0
5	I	PORTENABLE0	21	O	HDDATA1	37	O	TDATA13	53	O	TDATA14	69	O	NCLATCH
6	I	PORTENABLE1	22	O	HDDATA2	38	I	NRESET	54	O	TDATA15	70	O	NUMBER0
7	I	PORTENABLE2	23	O	HDDATA3	39	I	NHEADACTIVEF	55	I	TADD2	71	—	VDD
8	I	PRINTTYPE0	24	O	HDDATA4	40	I	PRINTPULSEF	56	I	TADD3	72	O	NUMBER1
9	I	PRINTTYPE1	25	O	HDDATA5	41	I	DATA7	57	I	PRINTPULSE1	73	O	NUMBER2
10	—	GND	26	O	HDDATA6	42	I	DATA6	58	I	NHEADACTIVE1	74	O	NUMBER3
11	I	TESTSEL	27	O	HDDATA7	43	I	DATA5	59	I	TADD4	75	O	NUMBER4
12	O	TSTCOMPA0	28	O	HDDATA8	44	I	DATA4	60	I	TADD5	76	O	NUMBER5
13	O	TSTCOMPA1	29	O	NHDLATCH	45	I	DATA3	61	I	TADD6	77	O	NUMBER6
14	O	TSTCOMPA2	30	O	HDCLK	46	I	DATA2	62	I	CLK1S4	78	O	NUMBER7
15	O	TSTCOMPA3	31	—	VDD	47	I	DATA1	63	—	GND	79	O	NUMBER8
16	O	TSTCOMPA4	32	O	NHDSTB	48	I	DATA0	64	I	CLK	80	O	NUMBER9

CXD8865R (HITACHI)

C-MOS GATE ARAY
—TOP VIEW—

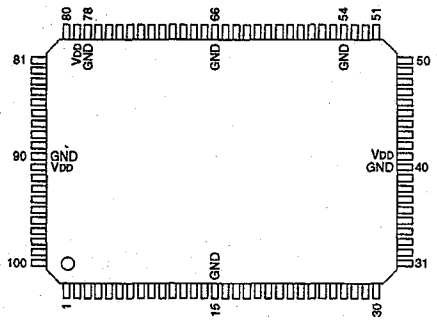


(VDD=+5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	D46	21	I	D24	41	—	GND	61	I	A7	81	O	XTALH
2	I	D45	22	I	D23	42	O	CLK2	62	—	GND	82	I	P
3	I	D44	23	I	D22	43	—	VDD	63	I	A6	83	O	TEST0
4	I	D43	24	I	D21	44	O	CLK4	64	I	A5	84	O	TEST1
5	I	D42	25	I	D20	45	I	LINN	65	I	A4	85	I	OSC0
6	I	D41	26	I	HEADACTN	46	I	ONNOFF	66	I	A3	86	I	OSC1
7	I	D40	27	I	PRINTPLS	47	I	S2	67	I	A2	87	I	XCLOCK
8	I	D36	28	I	D16	48	I	S1	68	I	A1	88	—	VDD
9	I	D35	29	I	D15	49	I	S0	69	I	A0	89	O	XOUTM
10	I	D34	30	I	D14	50	I	REN	70	I	RESETN	90	I	XINM
11	I	D33	31	I	D13	51	I	WEN	71	O	OUT7	91	I	RCLKSEL
12	—	GND	32	I	D12	52	I/O	D7	72	O	OUT6	92	O	XOUTH
13	I	D32	33	I	D11	53	I/O	D6	73	O	OUT5	93	I	XINH
14	I	D31	34	I	D10	54	I/O	D5	74	O	OUT4	94	—	GND
15	I	D30	35	I	LATCHN	55	I/O	D4	75	O	OUT3	96	O	TEST2
16	—	VDD	36	O	TEST7	56	I/O	D3	76	O	OUT2	96	O	TEST3
17	O	STBN	37	O	TEST8	57	I/O	D2	77	O	OUT1	97	O	TEST4
18	—	GND	38	—	VDD	58	I/O	D1	78	O	OUT0	98	O	TEST5
19	I	D26	39	O	TEST9	59	I/O	D0	79	O	XTALM	99	O	TEST6
20	I	D25	40	O	CLK	60	I	A8	80	—	VDD	100	O	RSTNOUT

CXD8868Q (SONY)

C-MOS GATE ARAY
—TOP VIEW—

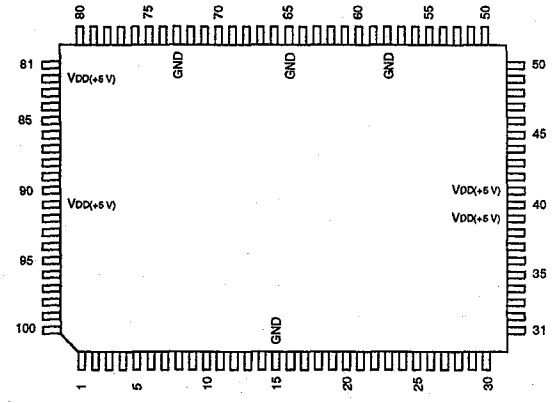


(VDD=+5V)

PIN No.	SIGNAL	PIN No.	SIGNAL	PIN No.	SIGNAL	PIN No.	SIGNAL	PIN No.	SIGNAL
1	CKPB	21	IOB5	41	VDD	61	IOA18	81	IOC11
2	CKPC	22	IOB6	42	IOA0	62	IOA19	82	IOC12
3	CKA	23	IOB7	43	IOA1	63	IOA20	83	IOC13
4	CKB	24	IOB8	44	IOA2	64	IOA21	84	IOC14
5	CKC	25	IOB9	45	IOA3	65	IOA22	85	IOC15
6	SEL0	26	IOB10	46	IOA4	66	GND	86	IOC16
7	SEL1	27	IOB11	47	IOA5	67	IOA23	87	IOC17
8	SEL2	28	IOB12	48	IOA6	68	IOC0	88	IOC18
9	DIR0	29	IOB13	49	IOA7	69	IOC1	89	IOC19
10	DIR1	30	IOB14	50	IOA8	70	IOC2	90	GND
11	ROT1	31	IOB15	51	IOA9	71	IOC3	91	VDD
12	ROT2	32	IOB16	52	IOA10	72	IOC4	92	IOC20
13	A0	33	IOB17	53	IOA11	73	IOC5	93	IOC21
14	A1	34	IOB18	54	GND	74	IOC6	94	IOC22
15	GND	35	IOB19	55	IOA12	75	IOC7	95	IOC23
16	IOB0	36	IOB20	56	IOA13	76	IOC8	96	INV
17	IOB1	37	IOB21	57	IOA14	77	IOC9	97	G
18	IOB2	38	IOB22	58	IOA15	78	GND	98	CS
19	IOB3	39	IOB23	59	IOA16	79	VDD	99	FIX
20	IOB4	40	GND	60	IOA17	80	IOC10	100	CKPA

CXD8869Q (SONY)

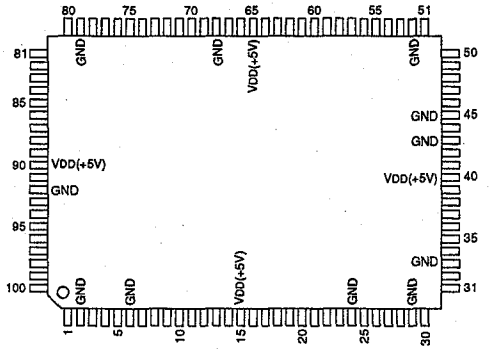
C-MOS CELL BACE IC
—TOP VIEW—



PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	B7	21	I/O	R4	41	—	VDD	61	I/O	OUTR6	81	I	REV
2	I/O	B6	22	I/O	R3	42	I	A3	62	I/O	OUTR7	82	—	VDD
3	I/O	B5	23	I/O	R2	43	I	A4	63	I/O	OUTG0	83	O	OUTPS0
4	I/O	B4	24	I/O	R1	44	I	A5	64	I/O	OUTG1	84	O	OUTPS1
5	I/O	B3	25	I/O	R0	45	I	A6	65	—	GND	85	O	OUTPS2
6	I/O	B2	26	I	RDN	46	I	A7	66	I/O	OUTG2	86	O	OUTPS3
7	I/O	B1	27	I	WRN	47	I	A8	67	I/O	OUTG3	87	O	OUTPS4
8	I/O	B0	28	I/O	D7	48	I	A9	68	I/O	OUTG4	88	O	OUTPS5
9	I/O	G7	29	I/O	D6	49	I	A10	69	I/O	OUTG5	89	O	OUTPS6
10	I/O	G6	30	I/O	D5	50	I	CS1N	70	I/O	OUTG6	90	O	OUTPS7
11	I/O	G5	31	I/O	D4	51	I	CS2N	71	I/O	OUTG7	91	—	VDD
12	I/O	G4	32	I/O	D3	52	I	CS3	72	I/O	OUTB0	92	I	CLK2
13	I/O	G3	33	I/O	D2	53	I	CS4	73	—	GND	93	I	TEST
14	I/O	G2	34	I/O	D1	54	I/O	OUTR0	74	I/O	OUTB1	94	O	Y6N
15	—	GND	35	I/O	D0	55	I/O	OUTR1	75	I/O	OUTB2	95	O	Y7N
16	I/O	G1	36	I	A0	56	I/O	OUTR2	76	I/O	OUTB3	96	I	BE0
17	I/O	G0	37	I	A1	57	I/O	OUTR3	77	I/O	OUTB4	97	I	BE1
18	I/O	R7	38	I	A2	58	—	GND	78	I/O	OUTB5	98	I	BE2
19	I/O	R6	39	—	VDD	59	I/O	OUTR4	79	I/O	OUTB6	99	I	CLK1
20	I/O	R5	40	I	RESETN	60	I/O	OUTR5	80	I/O	OUTB7	100	I	OE1N

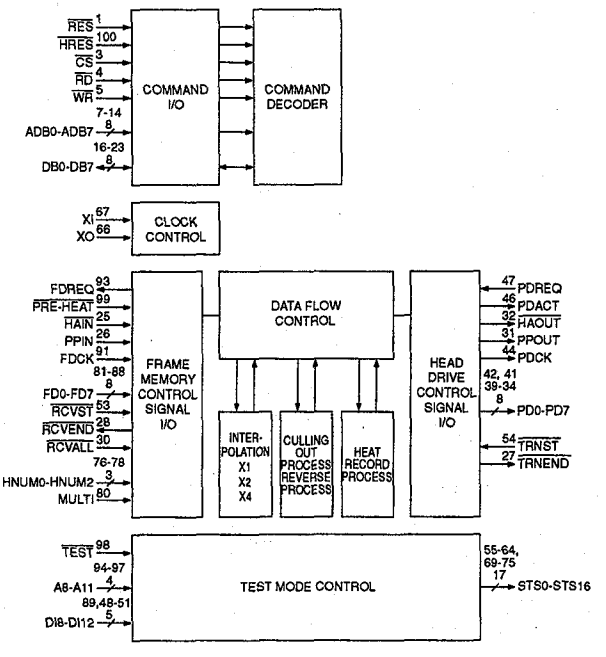
CXD8909Q (RICOH)

C-MOS CONTROLL THE PICTURE QUALITY OF
THE VIDEO PRINTERS
—TOP VIEW—



(VDD=+5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	RES	21	I/O	DB5	41	O	PD1	61	O	STS6	81	I	FD0
2	—	GND	22	I/O	DB6	42	O	PD0	62	O	STS7	82	I	FD1
3	I	CS	23	I/O	DB7	43	—	GND	63	O	STS8	83	I	FD2
4	I	RD	24	—	GND	44	O	PDCK	64	O	STS9	84	I	FD3
5	I	WR	25	I	HAIN	45	—	GND	65	—	VDD	85	I	FD4
6	—	GND	26	I	PPIN	46	O	PDACT	66	I	XO	86	I	FD5
7	I	ADB0	27	O	TRNEND	47	I	PDREQ	67	I	XI	87	I	FD6
8	I	ADB1	28	O	RCVEND	48	I	DI9	68	—	GND	88	I	FD7
9	I	ADB2	29	—	GND	49	I	DI10	69	O	STS10	89	I	DI8
10	I	ADB3	30	I	RCVALL	50	I	DI11	70	O	STS11	90	—	VDD
11	I	ADB4	31	O	PPOUT	51	I	DI12	71	O	STS12	91	I	FDCK
12	I	ADB5	32	O	HAOUT	52	—	GND	72	O	STS13	92	—	GND
13	I	ADB6	33	—	GND	53	I	RCVST	73	O	STS14	93	O	FDREQ
14	I	ADB7	34	O	PD7	54	I	TRNST	74	O	STS15	94	I	A8
15	—	VDD	35	O	PD6	55	O	STS0	75	O	STS16	95	I	A9
16	I/O	DB0	36	O	PD5	56	O	STS1	76	I	HNUM0	96	I	A10
17	I/O	DB1	37	O	PD4	57	O	STS2	77	I	HNUM1	97	I	A11
18	I/O	DB2	38	O	PD3	58	O	STS3	78	I	HNUM2	98	I	TEST
19	I/O	DB3	39	O	PD2	59	O	STS4	79	—	GND	99	I	PRE-HEAT
20	I/O	DB4	40	—	VDD	60	O	STS5	80	I	NULTI	100	I	HRES



CXD8911Q (SONY)

C-MOS GATE ARRAYS
—TOP VIEW—

INPUT

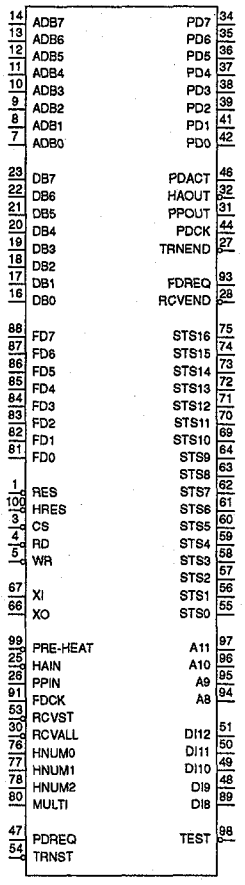
A8-A11	; INNER INPUT
ADB0-ADB7	; ADDRESS
$\overline{CS}$	; CHIP SELECT
DI8-DI12	; INNER INPUT
FD0-FD7	; PRINT DATA
FDCK	; PRINT DATA WRITE CLOCK
$\overline{HAIN}$	; INDIVIDUAL COLOR PRINT STATE (BEFORE DELAY)
HNUM0-HNUM2	; HEAD NUMBER SETTING
$\overline{RRES}$	; HOT RESET
MULTI	; MONO/MULTI SELECT
PDREQ	; PRINT DATA REQUEST
PPIN	; PRINT TIMING PULSE (BEFORE DELAY)
$\overline{PRE\text{-}HEAT}$	; PRE-HEAT MODE SELECT
$\overline{RCVALL}$	; FRAME DATA 1LINE INPUT END
$\overline{RCVST}$	; FRAME DATA INPUT START(PQC)
$\overline{RD}$	; READ
$\overline{RES}$	; RESET
$\overline{TEST}$	; TEST MODE SELECT
$\overline{TRNST}$	; PRINT DATA OUTPUT START(PQC)
$\overline{WR}$	; WRITE
XO, XI	; CLOCK

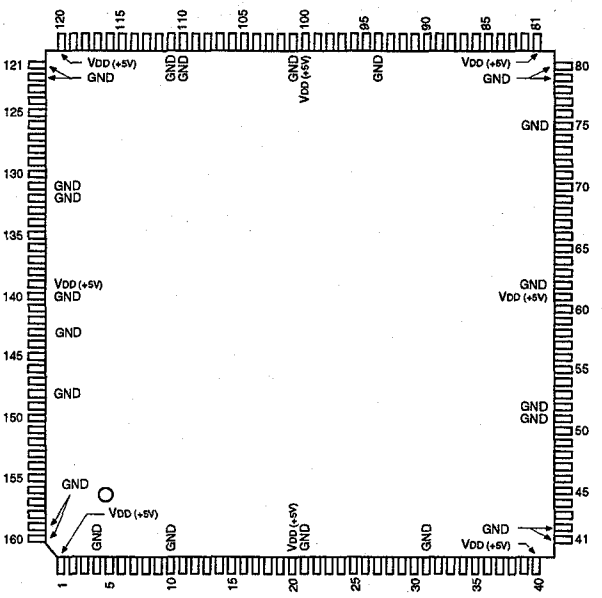
OUTPUT

FDREQ	; PRINT DATA REQUEST
$\overline{HAOUT}$	; INDIVIDUAL COLOR PRINT STATE
PD0-PD7	; PRINT DATA
PDACT	; PRINT DATA TRANSFER ACTIVE
PDCK	; PRINT DATA WRITE CLOCK
PPOUT	; PRINT TIMING PULSE
$\overline{RCVEND}$	; FRAME DATA INPUT END(PQC)
STS0-STS16	; INNER STATUS
$\overline{TRNEND}$	; PRINT DATA OUTPUT END(PQC)

INPUT/OUTPUT

DB0-DB7	; DATA



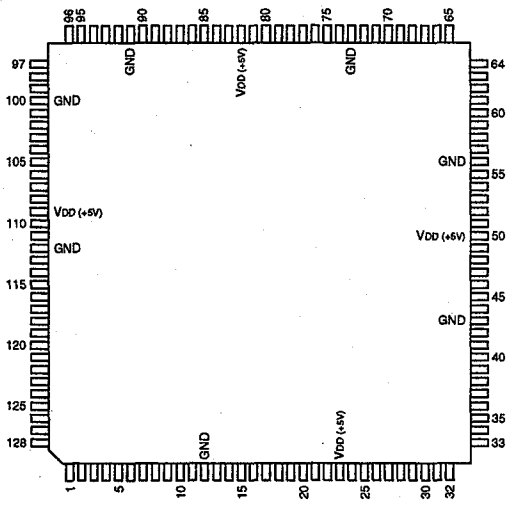


(VDD = +5V)

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	—	VDD	33	I/O	BD6	65	O	AA9	97	O	RAS0	129	I/O	BDD6
2	I/O	EXTAL	34	I/O	BD5	66	O	AA8	98	O	RAS01	130	I/O	BDD7
3	I/O	XTAL	35	I/O	BD4	67	O	AA7	99	—	N.C	131	—	GND
4	—	GND	36	I/O	BD3	68	O	AA6	100	—	VDD	132	—	GND
5	I/O	$\overline{CS0}$	37	I/O	BD2	69	O	AA5	101	—	GND	133	O	$\overline{ROE}$
6	I/O	CS1	38	I/O	BD1	70	O	AA4	102	I/O	RDD0	134	O	$\overline{GOE}$
7	I/O	$\overline{RESET}$	39	I/O	BD0	71	O	AA3	103	I/O	RDD1	135	O	$\overline{BOE}$
8	I/O	$\overline{RD}$	40	—	VDD	72	O	AA2	104	I/O	RDD2	136	O	$\overline{RWE}$
9	I/O	$\overline{WR}$	41	—	GND	73	O	AA1	105	I/O	RDD3	137	O	$\overline{GWE}$
10	—	GND	42	—	GND	74	O	AA0	106	I/O	RDD4	138	O	$\overline{BWE}$
11	I/O	D7	43	I/O	GD7	75	—	GND	107	I/O	RDD5	139	—	VDD
12	I/O	D6	44	I/O	GD6	76	I/O	CAS89	108	I/O	RDD6	140	—	GND
13	I/O	D5	45	I/O	GD5	77	I/O	CAS67	109	I/O	RDD7	141	I	TEST1
14	I/O	D4	46	I/O	GD4	78	I/O	CAS45	110	—	GND	142	I	TEST2
15	I/O	D3	47	I/O	GD3	79	—	GND	111	—	GND	143	—	GND
16	I/O	D2	48	I/O	GD2	80	—	GND	112	I/O	GDD0	144	O	DMACK1
17	I/O	D1	49	I/O	GD1	81	—	VDD	113	I/O	GDD1	145	O	DMACK2
18	I/O	D0	50	I/O	GD0	82	O	CAS23	114	I/O	GDD2	146	O	DMACK3
19	—	N.C	51	—	GND	83	O	CAS01	115	I/O	GDD3	147	O	DMACK4
20	—	VDD	52	—	GND	84	O	CAS9	116	I/O	GDD4	148	—	GND
21	—	GND	53	I/O	RD7	85	O	CAS8	117	I/O	GDD5	149	I	$\overline{E}$
22	I/O	A0	54	I/O	RD6	86	O	CAS7	118	I/O	GDD6	150	I	NEXT
23	I/O	A1	55	I/O	RD5	87	O	CAS6	119	I/O	GDD7	151	O	$\overline{DINREQ}$
24	I/O	A2	56	I/O	RD4	88	O	CAS5	120	—	VDD	152	I	$\overline{DINACK}$
25	I/O	A3	57	I/O	RD3	89	O	CAS4	121	—	GND	153	I	$\overline{DOUTREQ}$
26		R/W	58	I/O	RD2	90	O	CAS3	122	—	GND	154	O	$\overline{DOUTACK}$
27	I	$\overline{R}$	59	I/O	RD1	91	O	CAS2	123	I/O	BDD0	155	O	$\overline{BUSY}$
28	I	$\overline{G}$	60	I/O	RD0	92	O	CAS1	124	I/O	BDD1	156	I	$\overline{RSTOP}$
29	I	$\overline{B}$	61	—	VDD	93	O	CAS0	125	I/O	BDD2	157	I	$\overline{RREQ}$
30	I	TEST3	62	—	GND	94	—	GND	126	I/O	BDD3	158	O	$\overline{REFRESH}$
31	—	GND	63	O	AA11	95	O	RAS2	127	I/O	BDD4	159	—	GND
32	I/O	BD7	64	O	AA10	96	O	RAS1	128	I/O	BDD5	160	—	GND

CXD8931Q (SONY)

C-MOS CONTROL VIDEO RAM
—TOP VIEW—

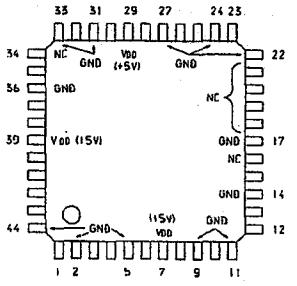


(VDD = +5 V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	RSB	27	O	RDACK	53	O	HCLR2	79	I	BIN5	105	O	BOUT4
2	I	CPUCS0B	28	I	DMACLK	54	O	OE2A	80	I	BIN6	106	O	BOUT5
3	I	CPUCS1B	29	I	TE	55	O	OE2B	81	I	BIN7	107	O	BOUT6
4	I	CPUCS2	30	I	SIN	56	—	GND	82	—	VDD	108	O	BOUT7
5	I	CPUCS3	31	O	SOUT	57	I	RIN0	83	O	ROUT0	109	—	VDD
6	I	CPUA0	32	I	TESTIN	58	I	RIN1	84	O	ROUT1	110	O	IBLNK
7	I	CPUA1	33	O	3/4HTRG	59	I	RIN2	85	O	ROUT2	111	O	OBLNK
8	I	CPUA2	34	O	VCLRO	60	I	RIN3	86	O	ROUT3	112	—	GND
9	I	CPUA3	35	O	INCO	61	I	RIN4	87	O	ROUT4	113	I	EXTCLK
10	I	CPUA4	36	O	HCLRO	62	I	RIN5	88	O	ROUT5	114	I	EXTHD
11	I	CPUA5	37	O	WEA	63	I	RIN6	89	O	ROUT6	115	I	EXTVD
12	—	GND	38	O	WEB	64	I	RIN7	90	O	ROUT7	116	I	INTCLK
13	I/O	CPUD0	39	O	ADD0	65	I	GIN0	91	—	GND	117	I	INTHD
14	I/O	CPUD1	40	O	ADD1	66	I	GIN1	92	O	GOUT0	118	I	INTVD
15	I/O	CPUD2	41	O	ADD2	67	I	GIN2	93	O	GOUT1	119	I	INTVF
16	I/O	CPUD3	42	O	ADD3	68	I	GIN3	94	O	GOUT2	120	I	MVADRTMG
17	I/O	CPUD4	43	—	GND	69	I	GIN4	95	O	GOUT3	121	I	VBLNKTRG
18	I/O	CPUD5	44	O	CKR1	70	I	GIN5	96	O	GOUT4	122	I	INTSET
19	I/O	CPUD6	45	O	VCLR1	71	I	GIN6	97	O	GOUT5	123	O	IVBLNK
20	I/O	CPUD7	46	O	INC1	72	I	GIN7	98	O	GOUT6	124	I	DMASTATB
21	I	CPURDB	47	O	HCLR1	73	—	GND	99	O	GOUT7	125	I	CPUINC
22	I	CPUWRD	48	O	OE1A	74	I	BIN0	100	—	GND	126	I	SCK
23	—	VDD	49	O	OE1B	75	I	BIN1	101	O	BOUT0	127	I	TCK
24	O	WDREQ	50	—	VDD	76	I	BIN2	102	O	BOUT1	128	I	SE
25	I	WDACK	51	O	VCLR2	77	I	BIN3	103	O	BOUT2			
26	I	RDREQ	52	O	INC2	78	I	BIN4	104	O	BOUT3			

CXD8932Q (SONY)

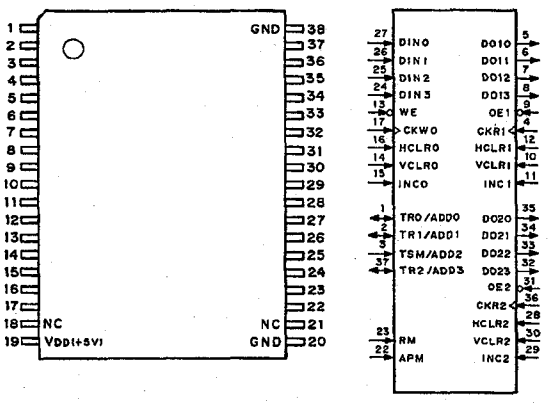
C-MOS GATE ARRAYS
—TOP VIEW—

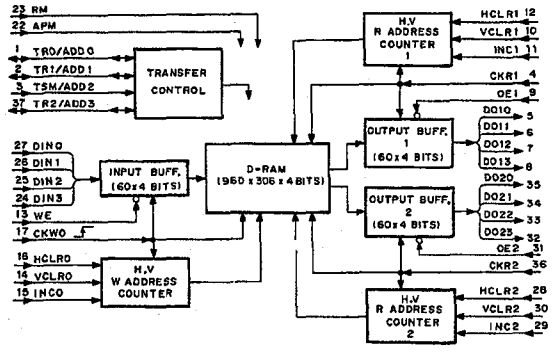


PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	O	CKO1A	23	O	CKO1B
2	—	GND	24	—	GND
3	I	CK1A	25	I	CK1B
4	O	CKO2A	26	O	CKO2B
5	—	GND	27	—	GND
6	O	HDDA	28	O	HDDB
7	—	VDD	29	—	VDD
8	I	HDSLA	30	I	HDSLB
9	—	GND	31	—	GND
10	I	HDA	32	I	HDB
11	—	GND	33	—	GND
12	O	XT2A	34	—	N.C.
13	I	XT1A	35	I	XT1B
14	—	GND	36	—	GND
15	O	XTDA	37	O	XTDB
16	—	N.C.	38	I	D0
17	—	GND	39	—	VDD
18	—	N.C.	40	I	D1
19	—	N.C.	41	I	D2
20	—	N.C.	42	I	D3
21	—	N.C.	43	I	D4
22	—	GND	44	—	GND

CXK1206AM (SONY)FLAT PACKAGE

C-MOS VIDEO FIELD MEMORY(960-COLUMNx360-ROWx4-BIT)
—TOP VIEW—





PIN	SIGNAL	DESCRIPTION
1	TR0/ADD0	W PORT 0 TRANSFER SYNC I/O, ADDRESS 0 INPUT
2	TR1/ADD1	R PORT 1 TRANSFER SYNC I/O, ADDRESS 1 INPUT
3	TSM/ADD2	TRANSFER SYNCHRONOUS MODE, ADDRESS 2 INPUT
4	CKR1	R PORT 1 SHIFT SIGNAL INPUT
5	DO10	R PORT 1 DATA 0 OUTPUT
6	DO11	R PORT 1 DATA 1 OUTPUT
7	DO12	R PORT 1 DATA 2 OUTPUT
8	DO13	R PORT 1 DATA 3 OUTPUT
9	OE1	R PORT 1 OUTPUT ENABLE INPUT
10	VCLR1	R PORT 1 VERTICAL CLEAR INPUT
11	INC1	R PORT 1 LINE INCREMENT INPUT
12	HCLR1	R PORT 1 HORIZONTAL CLEAR INPUT
13	WE	W PORT 0 WRITE ENABLE INPUT
14	VCLR0	W PORT 0 VERTICAL CLEAR INPUT
15	INC0	W PORT 0 LINE INCREMENT INPUT
16	HCLR0	W PORT 0 HORIZONTAL CLEAR INPUT
17	CKW0	W PORT 0 SHIFT SIGNAL INPUT
18	NC	(no connection)
19	VDD	+5V INPUT
20	GND	GND
21	NC	(no connection)
22	APM	ADDRESS PRESET MODE INPUT
23	RM	RECURSIVE MODE ENABLE INPUT
24	DIN3	W PORT 0 DATA 3 INPUT
25	DIN2	W PORT 0 DATA 2 INPUT
26	DIN1	W PORT 0 DATA 1 INPUT
27	DIN0	W PORT 0 DATA 0 INPUT
28	HCLR2	R PORT 2 HORIZONTAL CLEAR INPUT
29	INC2	R PORT 2 LINE INCREMENT INPUT
30	VCLR2	R PORT 2 VERTICAL CLEAR INPUT
31	OE2	R PORT 2 OUTPUT ENABLE INPUT
32	DO23	R PORT 2 DATA 3 OUTPUT
33	DO22	R PORT 2 DATA 2 OUTPUT
34	DO21	R PORT 2 DATA 1 OUTPUT
35	DO20	R PORT 2 DATA 0 OUTPUT
36	CKR2	R PORT 2 SHIFT SIGNAL INPUT
37	TR2/ADD3	R PORT 2 TRANSFER SYNC I/O, ADDRESS 3 INPUT
38	GND	GND

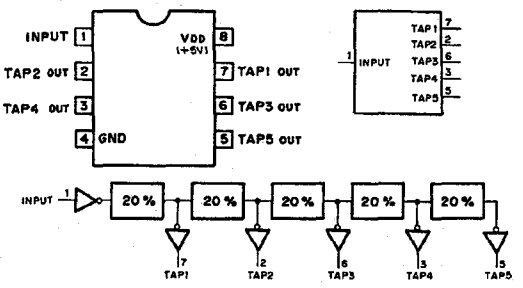
MODE SELECTION

CONTROL INPUTS			TS,TR/ADD		MODE
RM	APM	TSM	TR 0-2	ADD 0-3	
0	0	0	OUT-PUT	-	NON RECURSIVE MODE, TRANSFER SYNCHRONOUS MODE OUTPUT
0	0	1	IN-PUT	-	NON RECURSIVE MODE, TRANSFER SYNCHRONOUS MODE INPUT
0	1	-	-	IN-PUT	NON RECURSIVE MODE, ADDRESS PRESET MODE
1	0	0	OUT-PUT	-	RECURSIVE MODE, TRANSFER SYNCHRONOUS MODE OUTPUT
1	0	1	IN-PUT	-	RECURSIVE MODE, TRANSFER SYNCHRONOUS MODE INPUT

0:LOW LEVEL 1:HIGH LEVEL

DS1000Z-50 (DALLAS SEMICONDUCTOR)(DELAY TIME = 50nS)
DS1000Z-75 (DALLAS SEMICONDUCTOR)(DELAY TIME = 75nS)

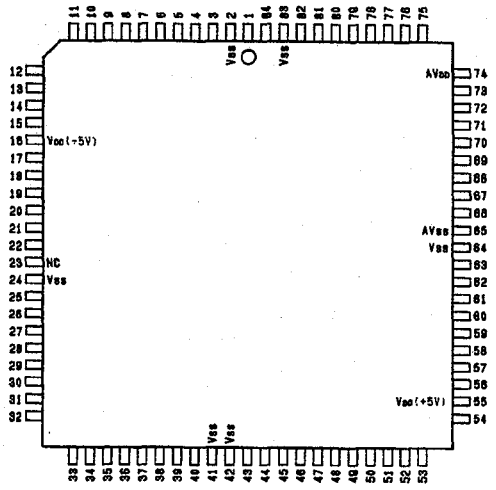
C-MOS DELAY LINE
—TOP VIEW—



TYPE. NO.	DELAY TIME (ns)				
	TAP1	TAP2	TAP3	TAP4	TAP5
DS1000M-50	10	20	30	40	50
DS1000M-60	12	24	36	48	60
DS1000M-75	15	30	45	60	75
DS1000M-100	20	40	60	80	100
DS1000M-125	25	50	75	100	125
DS1000M-150	30	60	90	120	150
DS1000M-175	35	70	105	140	175
DS1000M-200	40	80	120	160	200
DS1000M-250	50	100	150	200	250
DS1000M-500	100	200	300	400	500

HD6435328RA00F (HITACHI)

16-BIT CPU
—TOP VIEW—



(Vcc = +5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	XTAL	29	I/O	P34/D4	57	I/O	P71/FTI1
2	–	Vss	30	I/O	P35/D5	58	I/O	P72/FTI2
3	I/O	P10/φ	31	I/O	P36/D6	59	I/O	P73/FTI3/TMRI
4	I/O	P11/E	32	I/O	P37/D7	60	I/O	P74/FTOB1/FTCI1
5	I/O	P12/BACK	33	I/O	P40/A0	61	I/O	P75/FTOB2/FTCI2
6	I/O	P13/BREQ	34	I/O	P41/A1	62	I/O	P76/FTOB3/FTCI3
7	I/O	P14/WAIT	35	I/O	P42/A2	63	O	P77/FTOA1
8	I/O	P15/IRQ0	36	I/O	P43/A3	64	–	Vss
9	I/O	P16/IRQ1	37	I/O	P44/A4	65	–	AVss
10	I/O	P17/TMO	38	I/O	P45/A5	66	I/O	P80/AN0
11	I/O	P20/AS	39	I/O	P46/A6	67	I/O	P81/AN1
12	I/O	P21/R/W	40	I/O	P47/A7	68	I/O	P82/AN2
13	I/O	P22/DS	41	–	Vss	69	I/O	P83/AN3
14	I/O	P23/RD	42	–	Vss	70	I/O	P84/AN4
15	I/O	P24/WR	43	I/O	P50/A8	71	I/O	P85/AN5
16	–	Vcc	44	I/O	P51/A9	72	I/O	P86/AN6
17	I	MD0	45	I/O	P52/A10	73	I/O	P87/AN7
18	I	MD1	46	I/O	P53/A11	74	–	AVcc
19	I	MD2	47	I/O	P54/A12	75	I/O	P90/FTOA2
20	I	STBY	48	I/O	P55/A13	76	I/O	P91/FTOA3
21	I	RES	49	I/O	P56/A14	77	I/O	P92/PW1
22	I	NMI	50	I/O	P57/A15	78	I/O	P93/PW2
23	–	NC	51	I/O	P60/A16	79	I/O	P94/PW3
24	–	Vss	52	I/O	P61/A17	80	I/O	P95/TXD
25	I/O	P30/D0	53	I/O	P62/A18	81	I/O	P96/RXD
26	I/O	P31/D1	54	I/O	P63/A14	82	I/O	P97/SCK
27	I/O	P32/D2	55	–	Vcc	83	–	Vss
28	I/O	P33/D3	56	I/O	P70/TMCI	84	I	EXTAL

INPUT

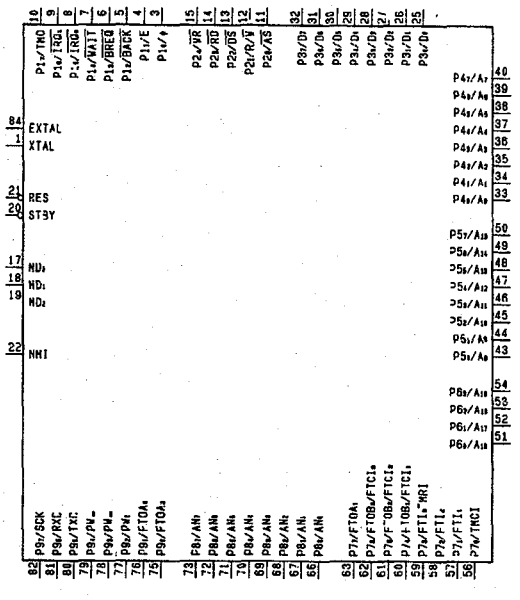
AN0 – AN7	; ANALOG INPUT
BREQ	; BUS REQUEST
EXRAL	; CONNECTED TO CRYSTAL OSCILLATOR.
FTCI1 – FTCI3	; FRT COUNTER CLOCK INPUT (CHANNEL 1 TO 3)
FTI1 – FTI3	; FRT INPUT CAPTURE INPUT (CHANNEL 1 TO 3)
IRQ0, 1	; INTERRUPTION REQUEST 0 AND 1
MD0 – MD2	; MODE SETTING
NMI	; NON MASKABLE INTERRUPTION
P80 – P87	; PORT 8
RES	; RESET
RXD	; RECEIVE DATA
SYBY	; STANDBY
TMCI	; 8-BIT TIMER CLOCK INPUT
TMRI	; 8-BIT TIMER COUNTER RESET INPUT
WAIT	; WAIT
XRAL	; CONNECTED TO CRYSTAL OSCILLATOR.

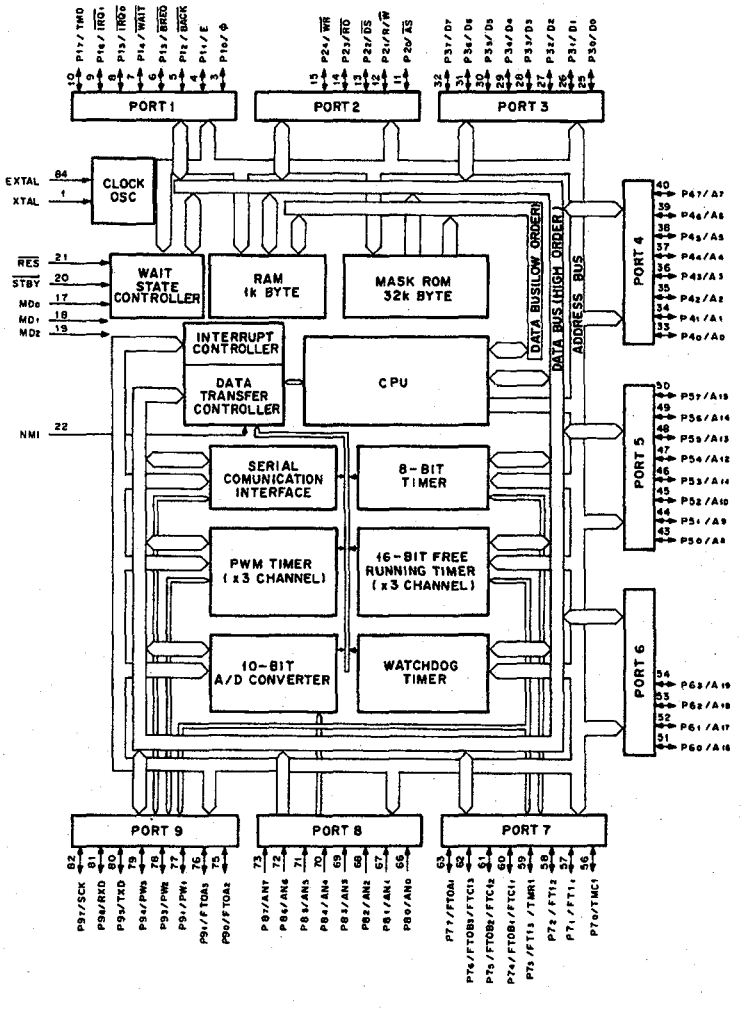
OUTPUT

A0 – A19	; ADDRESS BUS
AS	; ADDRESS STROBE
BACK	; BUS REQUEST ACKNOWLEDGE
DS	; DATA STROBE
E	; ENABLE CLOCK
FTOA1 – FTOA3	; FRT OUTPUT COMPARE A OUTPUT (CHANNEL 1 TO 3)
FTOB1 – FTOB3	; FRT OUTPUT COMPARE B OUTPUT (CHANNEL 1 TO 3)
PW1 – PW3	; PWM TIMER OUTPUT (CHANNEL 1 TO 3)
R/W	; READ/WRITE
RD	; READ
TMO	; 8-BIT TIMER OUTPUT
TXD	; SEND DATA
WR	; WRITE
φ	; SYSTEM CLOCK

INPUT/OUTPUT

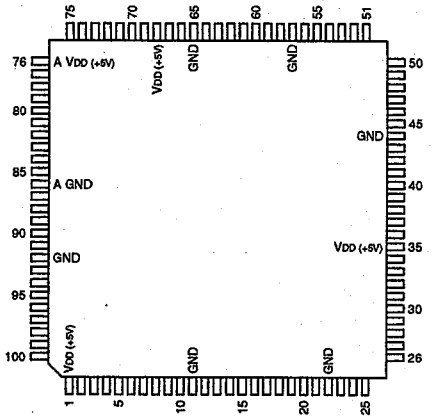
D0 – D7	; DATA BUS
P10 – P17	; PORT 1
P20 – P24	; PORT 2
P30 – P37	; PORT 3
P40 – P47	; PORT 4
P50 – P57	; PORT 5
P60 – P63	; PORT 6
P70 – P77	; PORT 7
P90 – P97	; PORT 9
SCK	; SERIAL CLOCK INPUT/OUTPUT





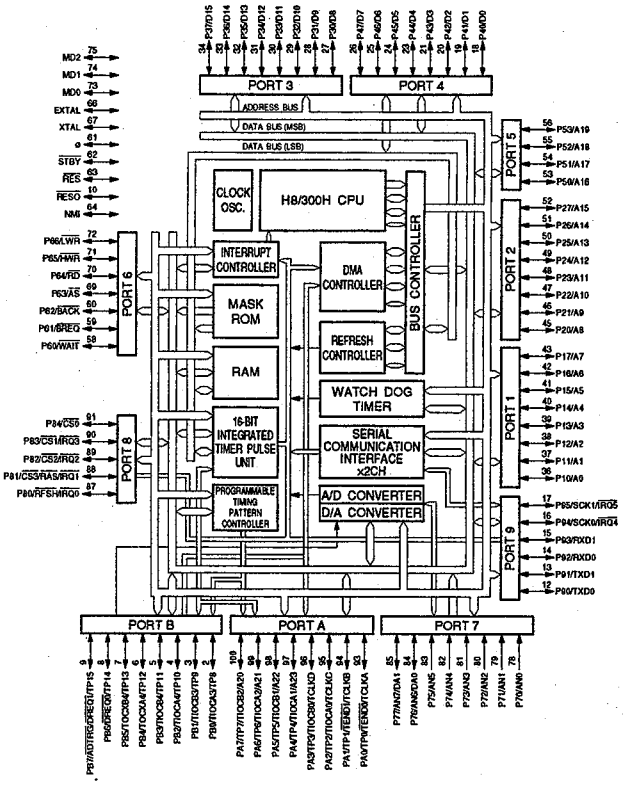
HD6473042F12 (HITACHI)

C-MOS 16-BIT MICRO PROCESSOR
—TOP VIEW—



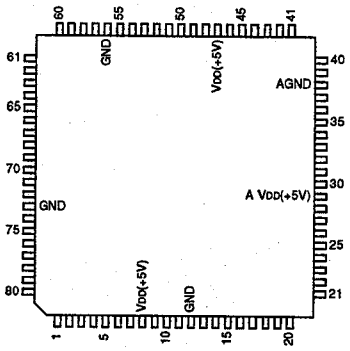
(VDD = +5 V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	—	VDD	26	I/O	P47/D7	51	I/O	P26/A14	76	—	A VDD
2	I/O	PB0/TIOCA3/TP8	27	I/O	P30/D8	52	I/O	P27/A15	77	I	VREF
3	I/O	PB1/TIOCB3/TP9	28	I/O	P31/D9	56	I/O	P50/A16	78	I	P70/AN0
4	I/O	PB2/TIOCA4/TP10	29	I/O	P32/D10	54	I/O	P51/A17	79	I	P71/AN1
5	I/O	PB3/TIOCB4/TP11	30	I/O	P33/D11	55	I/O	P52/A18	80	I	P72/AN2
6	I/O	PB4/TOCXA4/TP12	31	I/O	P34/D12	56	I/O	P53/A19	81	I	P73/AN3
7	I/O	PB5/TOCXB4/TP13	32	I/O	P35/D13	57	—	GND	82	I	P74/AN4
8	I/O	PB6/$\overline{DREQ0}$/TP14	33	I/O	P36/D14	58	I/O	P60/$\overline{WAIT}$	83	I	P75/AN5
9	I/O	PB7/$\overline{ADTRG0}$/REQ1/TP15	34	I/O	P37/D15	59	I/O	P61/$\overline{BREQ}$	84	I/O	P76/AN6/DA0
10	O	$\overline{RESO}$	35	—	VDD	60	I/O	P62/$\overline{BACK}$	85	I/O	P77/AN7/DA1
11	—	GND	36	I/O	P10/A0	61	O	ø	86	—	A GND
12	I/O	P90/TXD0	37	I/O	P11/A1	62	I	$\overline{STBY}$	87	I/O	P80/$\overline{RFSH}$/IRQ0
13	I/O	P91/TXD1	38	I/O	P12/A2	63	I	$\overline{RES}$	88	I/O	P81/$\overline{CS3}$/$\overline{RAS}$/IRQ1
14	I/O	P92/RXD0	39	I/O	P13/A3	64	I	NMI	89	I/O	P82/$\overline{CS2}$/IRQ2
15	I/O	P93RXD1	40	I/O	P14/A4	65	—	GND	90	I/O	P83/$\overline{CS1}$/IRQ3
16	I/O	P94/$\overline{IRQ4}$/SCK0	41	I/O	P15/A5	66	I	EXTAL	91	I/O	P84/$\overline{CS0}$
17	I/O	P95/$\overline{IRQ5}$/SCK1	42	I/O	P16/A6	67	I	XTAL	92	—	GND
18	I/O	P40/D0	43	I/O	P17/A7	68	—	VDD	93	I/O	PA0/TP0/$\overline{TEND0}$/TCLKA
19	I/O	P41/D1	44	—	GND	69	I/O	P63/AS	94	I/O	PA1/TP1/$\overline{TEND1}$/TCLKB
20	I/O	P42/D2	45	I/O	P20/A8	70	I/O	P64/$\overline{RD}$	95	I/O	PA2/TP2/TIOCA0/TCLKC
21	I/O	P43/D3	46	I/O	P21/A9	71	I/O	P65/$\overline{HWR}$	96	I/O	PA3/TP3/TIOCB0/TCLKD
22	—	GND	47	I/O	P22/A10	72	I/O	P66/$\overline{LWR}$	97	I/O	PA4/TP4/TIOCA1/A23
23	I/O	P44/D4	48	I/O	P23/A11	73	I	MD0	98	I/O	PA5/TP5/TIOCB1/A22
24	I/O	P45/D5	49	I/O	P24/A12	74	I	MD1	99	I/O	PA6/TP6/TIOCA2/A21
25	I/O	P46/D6	50	I/O	P25/A13	75	I	MD2	100	I/O	PA7/TP7/TIOCB2/A20



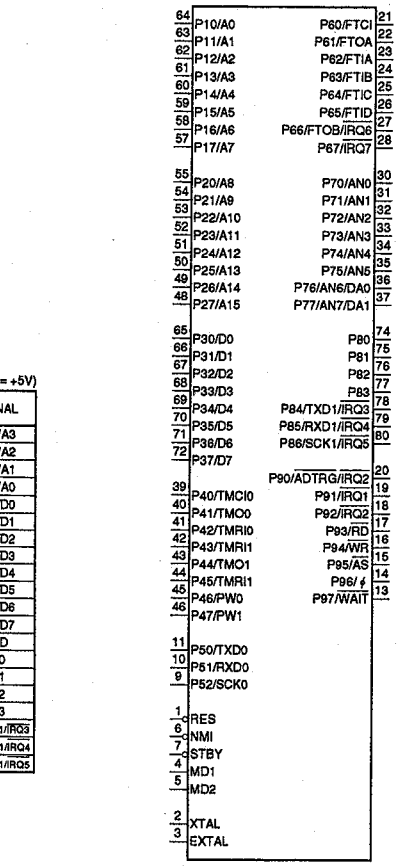
HD647338F10 (HITACHI) FLAT PACKAGE

C-MOS 8-BIT SINGLE CHIP MICRO COMPUTER
—TOP VIEW—



(VDD = +5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	I	RES	21	I/O	P60/FTCI	41	I/O	P42/TMRI0	61	I/O	P13/A3
2	I	XTAL	22	I/O	P61/FTOA	42	I/O	P43/TMCI1	62	I/O	P12/A2
3	I	EXTAL	23	I/O	P62/FTIA	43	I/O	P44/TMO1	63	I/O	P11/A1
4	I	MD1	24	I/O	P63/FTIB	44	I/O	P45/TMRI1	64	I/O	P10/A0
5	I	MD2	25	I/O	P64/FTIC	45	I/O	P46/PW0	65	I/O	P30/D0
6	I	NMI	26	I/O	P65/FTID	46	I/O	P47/PW1	66	I/O	P31/D1
7	I	STBY	27	I/O	P66/FTOB/IRQ6	47	—	VDD	67	I/O	P32/D2
8	—	VDD	28	I/O	P67/IRQ7	48	I/O	P27/A15	68	I/O	P33/D3
9	I/O	P52/SCK0	29	—	AVDD	49	I/O	P26/A14	69	I/O	P34/D4
10	I/O	P51/RXD0	30	I/O	P70/AN0	50	I/O	P25/A13	70	I/O	P35/D5
11	I/O	P50/TXD0	31	I/O	P71/AN1	51	I/O	P24/A12	71	I/O	P36/D6
12	—	GND	32	I	P72/AN2	52	I/O	P23/A11	72	I/O	P37/D7
13	I/O	P97/WAIT	33	I	P73/AN3	53	I/O	P22/A10	73	—	GND
14	I/O	P96/ϕ	34	I	P74/AN4	54	I/O	P21/A9	74	I/O	P80
15	I/O	P95/AS	35	I	P75/AN5	55	I/O	P20/A8	75	I/O	P81
16	I/O	P94/WR	36	I	P76/AN6/DA0	56	—	GND	76	I/O	P82
17	I/O	P93/RD	37	I	P77/AN7/DA1	57	I/O	P17/A7	77	I/O	P83
18	I/O	P92/IRQ2	38	—	AGND	58	I/O	P16/A6	78	I/O	P84/TXD1/IRQ3
19	I/O	P91/IRQ1	39	I/O	P40/TMCI0	59	I/O	P15/A5	79	I/O	P85/RXD1/IRQ4
20	I/O	P90/ADTRG/IRQ2	40	I/O	P41/TMO0	60	I/O	P14/A4	80	I/O	P86/SCK1/IRQ5



INPUT

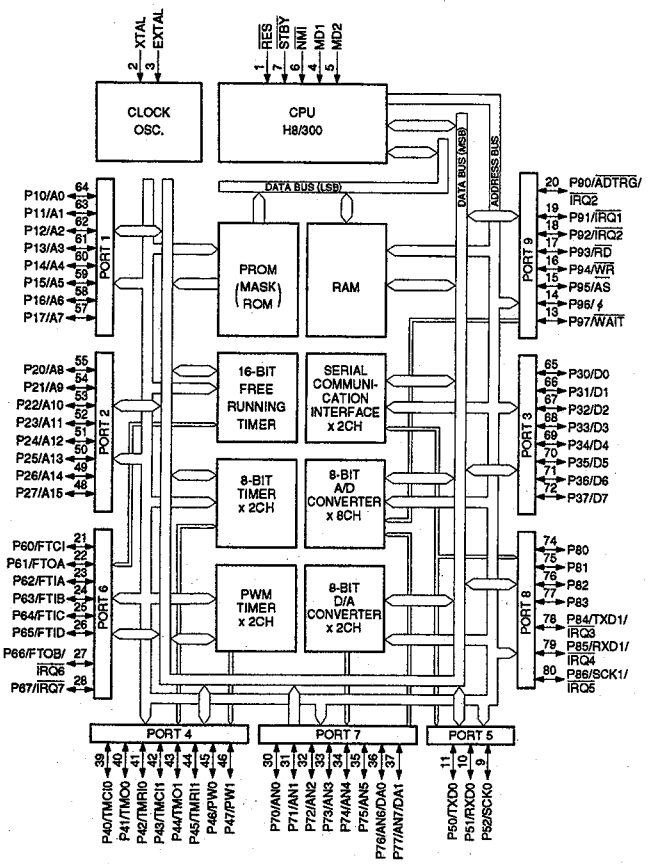
ADTRG	;	A/D CONVERTER EXTERNAL TRIGGER
AN0-AN7	;	ANALOG
EXTAL	;	CRYSTAL OSCILLATOR
FTCI	;	FRT COUNTER CLOCK
FTIA-FTID	;	FRT INPUT CAPTURE
IRQ0-IRQ7	;	INTERRUPT REQUEST
MD0,MD1	;	MODE
NMI	;	NON-MASKABLE INTERRUPT
P70-P77	;	PORT 7
RES	;	RESET
RXD0,RXD1	;	RECEIVE DATA
STBY	;	STANDBY
TMCI0,TMCI1	;	8-BIT TIMER CLOCK
TMRI0,TMRI1	;	8-BIT TIMER COUNTER RESET
WAIT	;	WAIT
XTAL	;	CRYSTAL OSCILLATOR
ϕ	;	SYSTEM CLOCK

OUTPUT

A0-A15	;	ADDRESS BUS
AS	;	ADDRESS STROBE
DA0,DA1	;	ANALOG
FTOA,FTOB	;	FRT OUTPUT COMPERE
PW0,PW1	;	PWM TIMER
RD	;	READ
TMO0,TMO1	;	8-BIT TIMER
TXD0,TXD1	;	TRANSCEIVER DATA
WR	;	WRITE

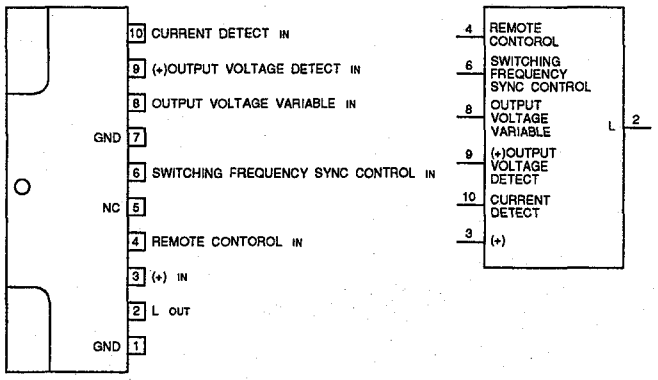
INPUT/OUTPUT

D0-D7	;	DATA BUS
P10-P17	;	PORT 1
P20-P27	;	PORT 2
P30-P37	;	PORT 3
P40-P47	;	PORT 4
P50-P52	;	PORT 5
P60-P67	;	PORT 6
P80-P86	;	PORT 8
P90-P97	;	PORT 9
SCK0,SCK1	;	SERIAL CLOCK



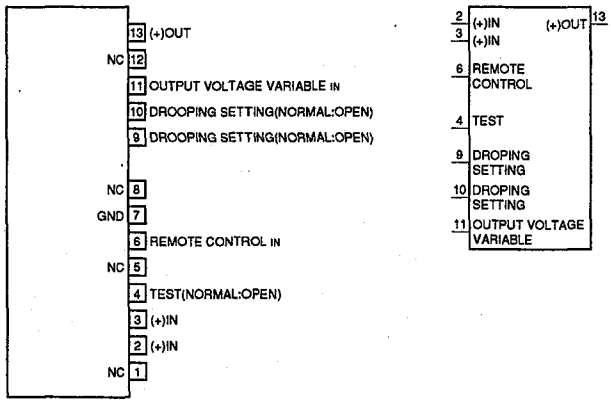
HLD05003M (SHINDENGEN)

DC/DC CONVERTER
—SIDE VIEW—



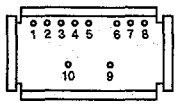
HLE120R6M (SHINDENGEN)

C-MOS 8-BIT SINGLE CHIP MICRO COMPUTER
—TOP VIEW—

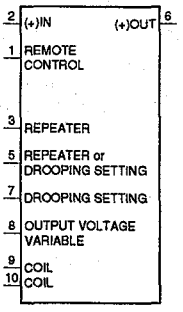


HLE121R2M (SHINDENGEN)

DC/DC CONVERTER MODULE
—VOTTOM VIEW—

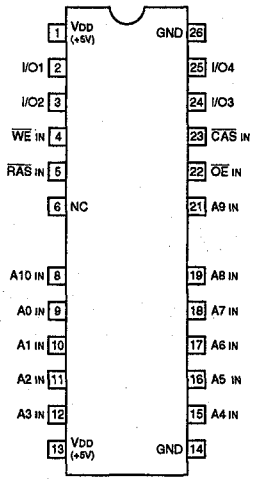


PIN No.	I/O	SIGNAL
1	I	REMOTE CONTROL
2	I	(+)IN
3	—	REPEATER
4	—	GND
5	I	REPEATER or DROOPING SETTING
6	O	(+)OUT
7	—	DROOPING SETTING(NORMAL:OPEN)
8	I	OUTPUT VOLTAGE VARIABLE
9	I	COIL
10	I	COIL

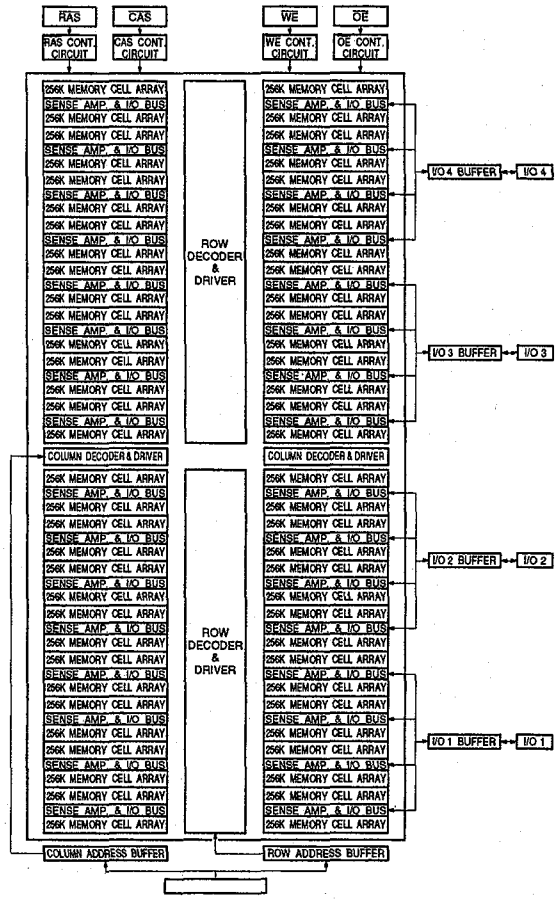


HM5117400AS7GS (HITACHI) FLAT PACKAGE

C-MOS 8-BIT SINGLE CHIP MICRO COMPUTER
—TOP VIEW—

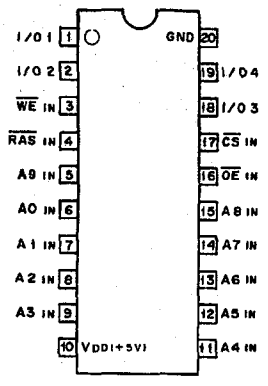


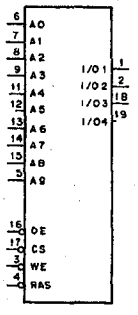
A0 - A10 ; ADDRESS INPUTS
CAS ; COLUMN ADDRESS STROBE INPUT
I/O1 - I/O4 ; DATA INPUTS/OUTPUTS
OE ; OUTPUT ENABLE INPUT
RAS ; ROW ADDRESS STROBE INPUT
EW ; READ/WRITE ENABLE INPUT



HM514400BS7GS (HITACHI) FLAT PACKAGE

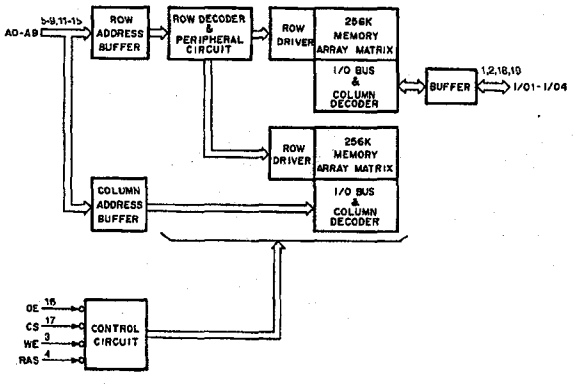
C-MOS 8-BIT SINGLE CHIP MICRO COMPUTER
—TOP VIEW—





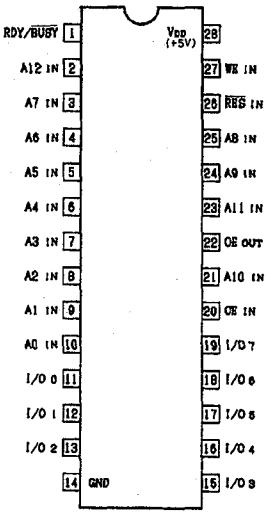
INPUT
A0 – A8 ; ADDRESS
$\overline{CS}$; CHIP SELECT
$\overline{OE}$; OUTPUT ENABLE
$\overline{RAS}$; ROW ADDRESS STROBE
$\overline{WE}$; WRITE ENABLE

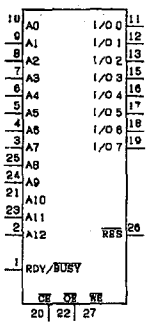
INPUT/OUTPUT
I/O1 – I/O4 ; DATA



HN58C66SFP25TZ (HITACHI) FLAT PACKAGE

C-MOS 64K (8192 x 8)-BIT EEPROM
—TOP VIEW—





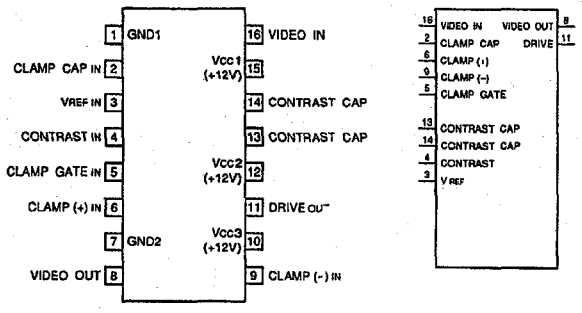
A0-A12 ; ADDRESS INPUTS
$\overline{CE}$; CHIP ENABLE INPUT
I/O0-I/O7 ; DATA INPUTS/OUTPUTS
$\overline{OE}$; OUTPUT ENABLE
RDY/$\overline{BUSY}$; READY/BUSY OUTPUT
$\overline{WE}$; WRITE ENABLE INPUT
$\overline{RES}$; PROGRAM RESET INPUT

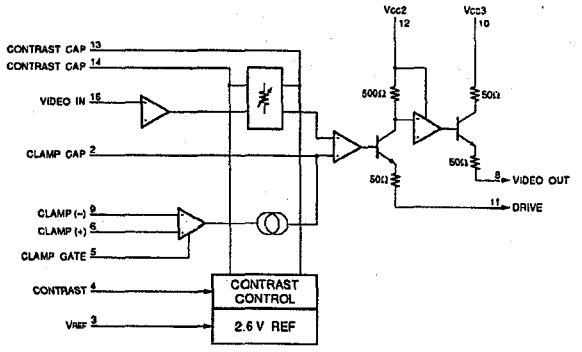
$\overline{CE}$	$\overline{OE}$	$\overline{WE}$	RDY/$\overline{BUSY}$	$\overline{RES}$	I/O TERMINAL	FUNCTION
0	0	1	HI-Z	1	D_{OUT}	READ
1	X	X	HI-Z	X	HI-Z	STANDBY
0	1	0	HI-Z→LOW	1	D_{IN}	WRITE
0	1	1	HI-Z	1	HI-Z	DESELECT
X	X	1	HI-Z	X	-	WRITE INH
X	0	X	HI-Z	X	-	WRITE INH
C	0	1	LOW	1	DATA OUT(I/O7)	DATA POLLING
X	X	X	HI-Z	0	HI-Z	PROGRAM RESET

0:LOW LEVEL
1:HIGH LEVEL
X:DON'T CARE
HI-Z:HIGH IMPEDANCE

LM1201M (NS) FLAT PACKAGE

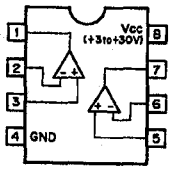
VIDEO AMPLIFITER
—TOP VIEW—





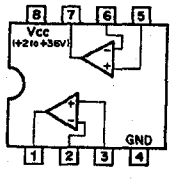
LM358PS (TI) FLAT PACKAGE

DUAL OPERATIONAL AMPLIFIERS
—TOP VIEW—



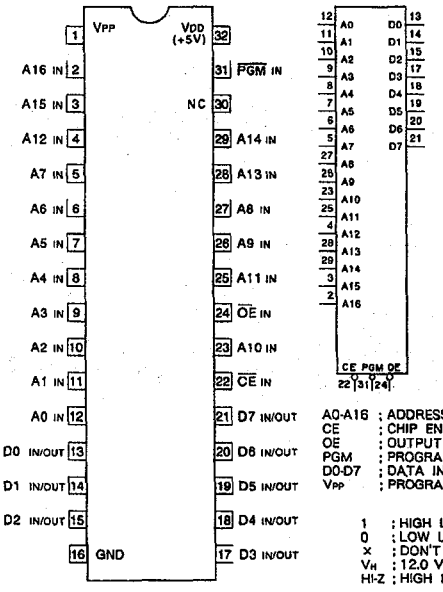
LM393PS (TI) FLAT PACKAGE

DUAL VOLTAGE COMPARATORS
—TOP VIEW—



M27C2001-15F1 (SGS)

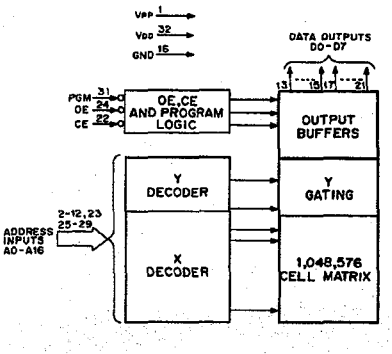
C-MOS 1M (128K x 8)-BIT UV EPROM
—TOP VIEW—



A0-A16 ; ADDRESS INPUTS
CE ; CHIP ENABLE INPUT
OE ; OUTPUT ENABLE
PGM ; PROGRAM INPUT
D0-D7 ; DATA INPUTS/OUTPUTS
VPP ; PROGRAMMING VOLTAGE INPUT

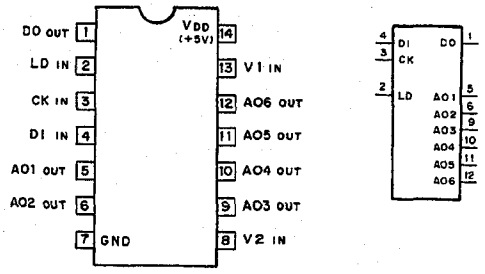
1 ; HIGH LEVEL
0 ; LOW LEVEL
X ; DON'T CARE
VH ; 12.0 V ± 0.5 V
HI-Z ; HIGH IMPEDANCE

MODE	CE	OE	A9	PGM	VPP	OUTPUT
READ	0	0	X	X	X	DOUT
OUTPUT DISABLE	0	1	X	X	X	HI-Z
STANDBY	1	X	X	X	X	HI-Z
PROGRAM	0	1	X	0	VPP	DIN
PROGRAM VERIFY	0	0	X	1	VPP	DOUT
PROGRAM INHIBIT	1	X	X	X	VPP	HI-Z
ELECTRONIC SIGNATURE	0	0	VH	1	VDD	CODE



M62354P (MITSUBISHI)

C-MOS 8-BITS 6CHANNEL D/A CONVERTER
—TOP VIEW—

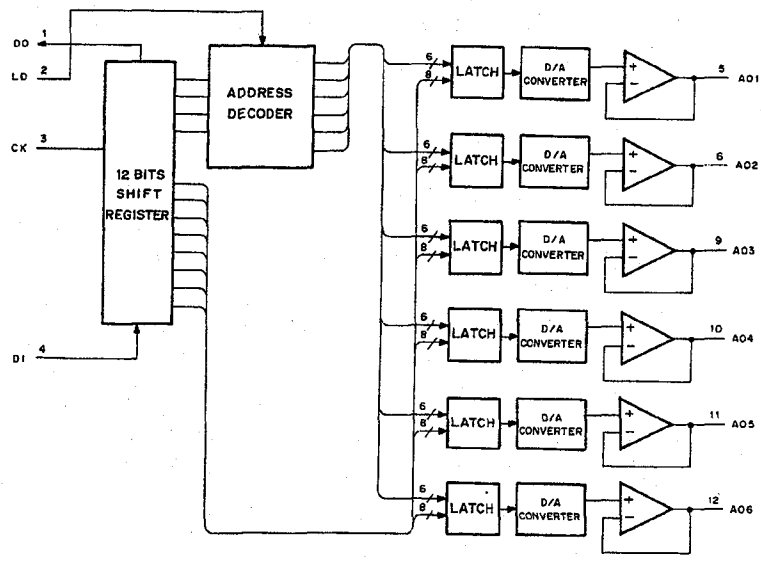


AO1 – AO6 ; 8 BITS D/A OUTPUTS
CK ; CLOCK INPUT
DI ; 12 BITS SERIAL DATA INPUT
DO ; BIT DATA OF MSB OF 12 BITS SHIFT REGISTER OUTPUT
LD ; LOAD INPUT
V1 ; REFERENCE VOLTAGE (UPPER) +3.5 to +5 (V_{DD}) V
V2 ; REFERENCE VOLTAGE (LOWER) 0 to +1.5 (V_{DD} – 3.5) V

D0	D1	D2	D3	D4	D5	D6	D7	D/A OUTPUT
0	0	0	0	0	0	0	0	(V1 – V2)/256 × 1 + V2
1	0	0	0	0	0	0	0	(V1 – V2)/256 × 2 + V2
0	1	0	0	0	0	0	0	(V1 – V2)/256 × 3 + V2
1	1	0	0	0	0	0	0	(V1 – V2)/256 × 4 + V2
:	:	:	:	:	:	:	:	:
0	1	1	1	1	1	1	1	(V1 – V2)/256 × 255 + V2
1	1	1	1	1	1	1	1	V1

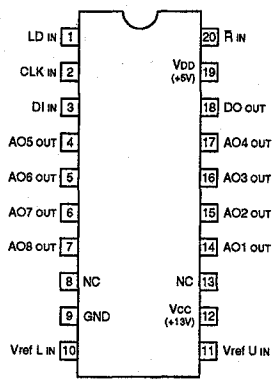
D8	D9	D10	D11	ADDRESS SELECT
0	0	0	0	X
0	0	0	1	AO1
0	0	1	0	AO2
0	0	1	1	AO3
0	1	0	0	AO4
0	1	0	1	AO5
0	1	1	0	AO6
0	1	1	1	X
1	X	X	X	X

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE



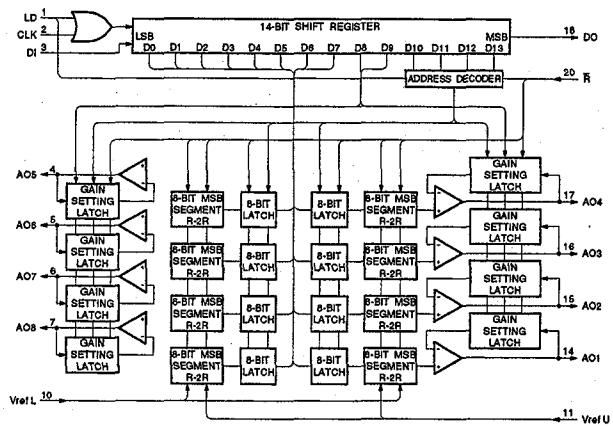
M62359FP (MITSUBISHI)

C-MOS 8-BITS 6CHANNEL D/A CONVERTER
—TOP VIEW—



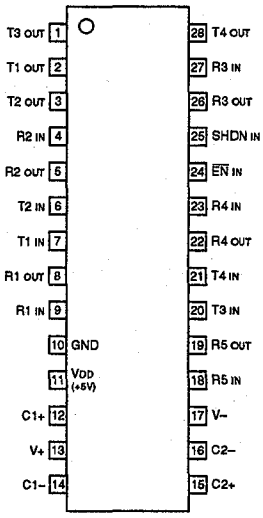
INPUT
CLK ; SHIFT CLOCK
DI ; SERIAL DATA
LD ; LOAD
$\overline{R}$; R : LOW LEVEL = AO : Vref L + 1LSB
Vref L ; D/A CONV. LOW SIDE REFERENCE VOLTAGE
Vref U ; D/A CONV. UP SIDE REFERENCE VOLTAGE
V_{CC} ; ANALOG POWER SUPPLY
V_{DD} ; DIGITAL POWER SUPPLY

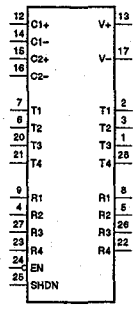
OUTPUT
AO1 - AO8 ; D/A CONVERT
DO ; BIT DATA (14-BIT SHIFT REGISTER MSB)

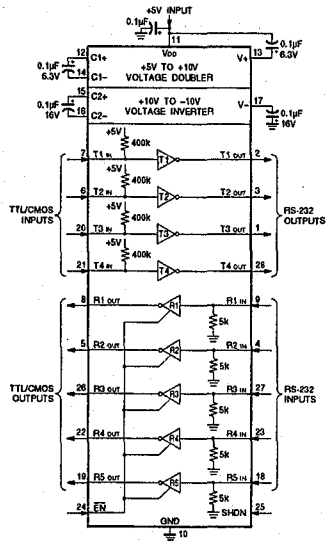


MAX211CAI (MITSUBISHI)

C-MOS RS-232 TRANSSCEIVER
—TOP VIEW—

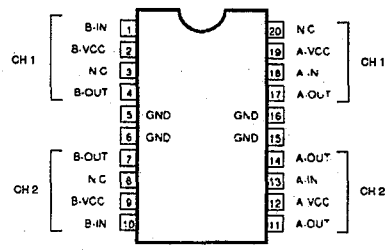


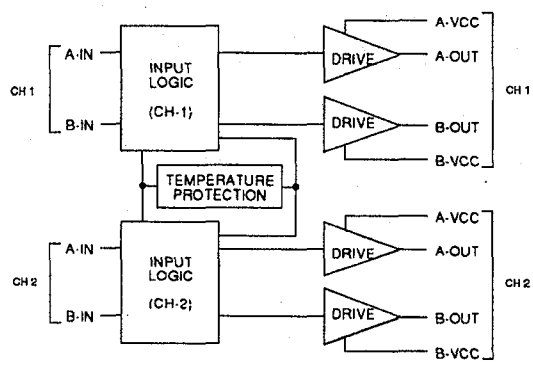




MB3863PF-G-BND

DUAL MODE MOTOR DRIVER
—TOP VIEW—

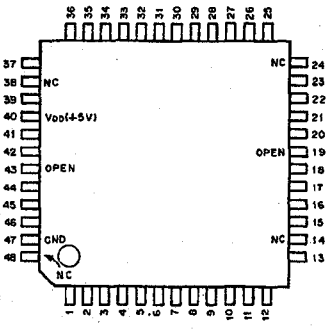




MB89371APF (FUJITSU)

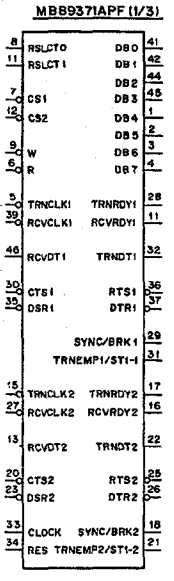
C-MOS DUAL SERIAL DATA TRANSMITTER/RECEIVETR UNIT
—TOP VIEW—

MB89371AH-PF (FUJITSU)
MB89371APF (FUJITSU)
C-MOS DUAL SERIAL DATA TRANSMITTER/RECEIVER UNIT
– TOP VIEW –



NC : NON CONNECT TERMINAL (OPEN)
OPEN : NEVER CONNECT TERMINAL

MB89371APF (1/3)



(Vcc = + 5V)

PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL	PIN NO.	I/O	SIGNAL
1	I/O	DB4	17	O	TRNRDY2	33	I	CLOCK
2	I/O	DB5	18	I/O	SYNC/BRK2	34	I	RST
3	I/O	DB6	19	–	OPEN	35	I	DSR1
4	I/O	DB7	20	I	CTS2	36	O	RTS1
5	I	TRNCLK1	21	O	TRNEMP2/ST1-2	37	I	DTR1
6	I	W	22	O	TRNDT2	38	–	NC
7	I	CS1	23	O	DSR2	39	I	RCVCLK1
8	I	RSLCT0	24	–	NC	40	–	Vcc
9	I	R	25	O	RTS2	41	I/O	DB0
10	O	RCVRDY1	26	O	DTR2	42	I/O	DB1
11	I	RSLCT1	27	I	RCVCLK2	43	–	OPEN
12	I	CS2	28	O	TRNRDY1	44	I/O	DB2
13	I	RCVDT2	29	I/O	SYNC/BRK1	45	I/O	DB3
14	–	NC	30	I	CTS1	46	I	RCVDT1
15	I	TRNCLK2	31	O	TRNEMP1/ST1-1	47	–	GND
16	O	RCVRDY2	32	O	TRNDT1	48	–	NC

INPUT

CLOCK	; CLOCK (4.9152MHz) FOR REFERENCE OF TIMING.
CSn	; CHIP SELECT OF CHANNELn.(n = 1 OR 2)
CTSn	; CLEAR TO SEND OF CHANNELn.(n = 1 OR 2)
DSRn	; DATA SET READY OF CHANNELn.(n = 1 OR 2)
R	; READ ENABLE
RCVCLKn	; RECEIVER CLOCK OF CHANNELn.(n = 1 OR 2)
RCVDTn	; RECEIVE DATA OF CHANNELn. (n = 1 OR 2)
RSLCTn	; REGISTERS SELECT LINEn.(n = 0 AND 1)
RST	; RESET PULSE
TRNCLKn	; TRANSMITTER CLOCK OF CHANNELn.(n = 1 OR 2)
W	; WRITE ENABLE

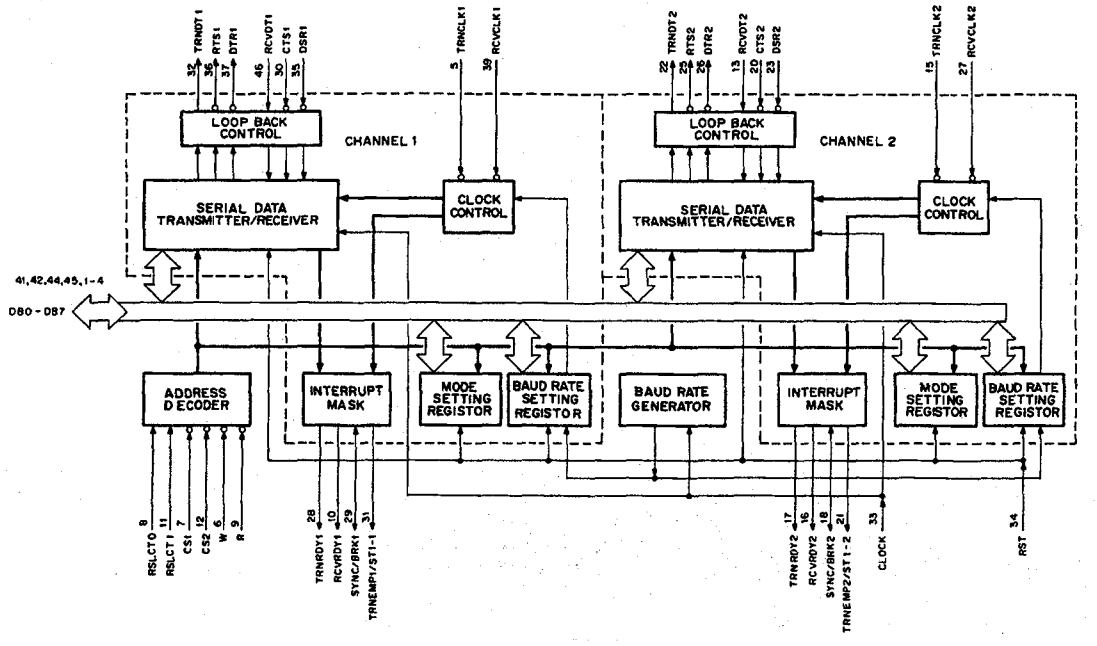
OUTPUT

DTRn	; DATA TERMINAL READY OF CHANNELn.(n = 1 OR 2)
RCVRDYn	; RECEVIER READY OF CHANNELn.(n = 1 OR 2)
RTSn	; REQUEST TO SEND OF CHANNELn.(n = 1 OR 2)
TRNDTn	; TRANSMIT DATA OF CHANNELn.(n = 1 OR 2)
TRNEMPn/ST1-n	; TRANSMITTER EMPTY/BAUD RATE CLOCK OUT OF CHANNELn.(n = 1 OR 2)
TRNRDYn	; TRANSMIT READY OF CHANNELn.(n = 1 OR 2)

INPUT/OUTPUT

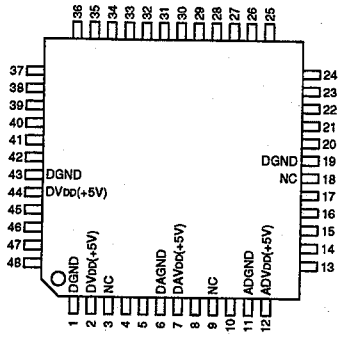
DBn	; DATA BUS LINEn.(n = 0 TO 7)
SYNC/BRKn	; SYNCHRONIZATION CHARACTOR/BREAK CODE DETECT OF CHANNELn.(n = 1 OR 2)

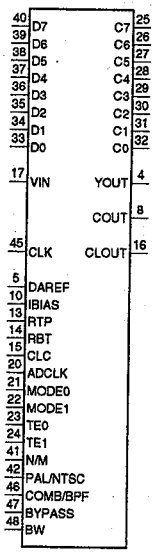
NC	; NON CONNECT TERMINAL (OPEN)
OPEN	; NEVER CONNECT TERMINAL



MC141625AFU

DUAL MODE MOTOR DRIVER
—TOP VIEW—





(VDD = +5V)

PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL	PIN No.	I/O	SIGNAL
1	—	DGND	17	I	VIN	33	I/O	D0
2	—	DVDD	18	—	NC	34	I/O	D1
3	—	NC	19	—	DGND	35	I/O	D2
4	O	YOUT	20	I	ADCLK	36	I/O	D3
5	I	DAREF	21	I	MODE0	37	I/O	D4
6	—	DAGND	22	I	MODE1	38	I/O	D5
7	—	DAVDD	23	I	TE0	39	I/O	D6
8	O	COUT	24	I	TE1	40	I/O	D7
9	—	NC	25	I/O	C7	41	I	N/M
10	I	IBIAS	26	I/O	C6	42	I	PAL/NTSC
11	—	ADGND	27	I/O	C5	43	—	DGND
12	—	ADVDD	28	I/O	C4	44	—	DVDD
13	I	RTP	29	I/O	C3	45	I	CLK
14	I	RBT	30	I/O	C2	46	I	COMB/BPF
15	I	CLC	31	I/O	C1	47	I	BYPASS
16	O	CLOUT	32	I/O	C0	48	I	BW

INPUT

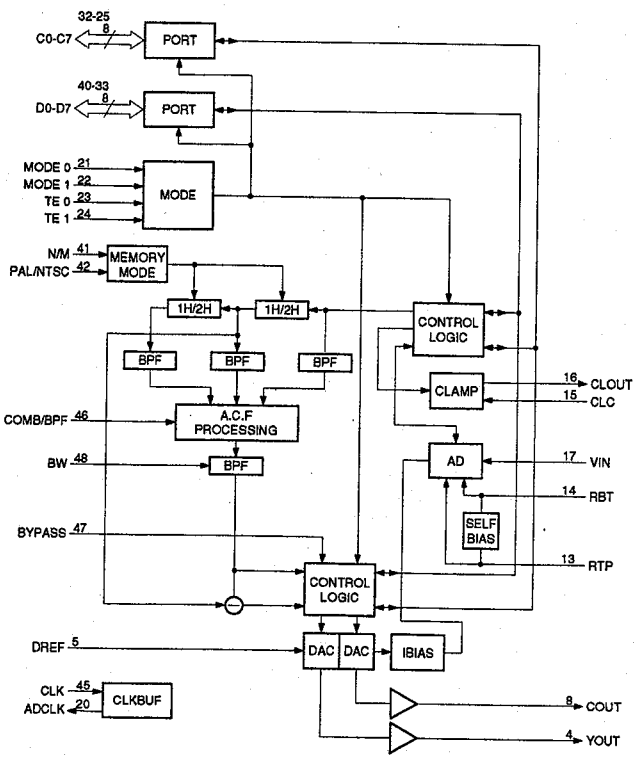
ADCLK	; A/D CONVERTER CLOCK
BW	; C SIGNAL BAND PASS FILTER BAND SELECT
BYPASS	; BYPASS MODE
CLC	; CLAMP COUPLING
CLK	; CLOCK
COMB/BPF	; COMB FILTER/BAND PASS FILTER SELECT
DAREF	; A/D CONVERTER REFERENCE
IBIAS	; A/D,A/D CONVERTER BIAS CIRCUIT CURRENT CONTROL
MODE0,MODE1	; MODE
N/M	; PAL N,PAL M MODE
PAL/NTSC	; PAL/NTSC MODE
RBT	; A/D CONVERTER BOTTOM REFERENCE VOLTAGE
RTP	; A/D CONVERTER TOP REFERENCE VOLTAGE
TE0,TE1	; TEST MODE
VIN	; A/D CONVERTER

OUTPUT

CLOUT	; CLAMP VOLTAGE
COUT	; C OUT
YOUT	; Y OUT

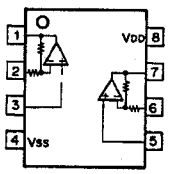
INPUT/OUTPUT

C0-C7	; CLAMP LEVEL IN/DIGITAL I/O INTERFACE1
D0-D7	; DIGITAL I/O INTERFACE2



MC14576CF (MOTOROLA) FLAT PACKAGE

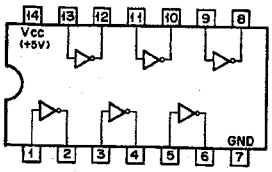
C-MOS DUAL VIDEO AMPLFIERS
—TOP VIEW—

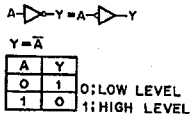


※VDD + | Vss | = + 5V to + 12V

MC74F04M (MOTOROLA) FLAT PACKAGE

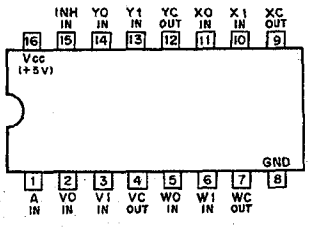
TTL INVERTER
—TOP VIEW—

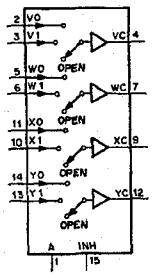




MC74F257AMEL (MOTOROLA) FLAT PACKAGE

C-MOS DUAL VIDEO AMPLFIERS
—TOP VIEW—



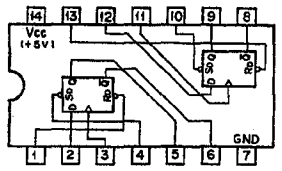


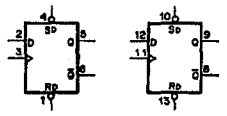
CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	OPEN

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

MC74F74M (MOTOROLA) FLAT PACKAGE

TTL D-TYPE FLIP FLOP WITH DIRECT SET/RESET
—TOP VIEW—



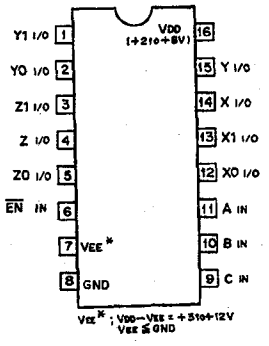


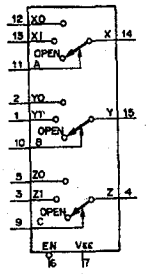
INPUTS				OUTPUTS	
So	RD	CK	D	Qn+1	Qn+1
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1*	1*
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Qn	Qn

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE
1*; NONSTABLE

MC74HC4053F (MOTOROLA) FLAT PACKAGE

C-MOS TRIPLE 2-CHANNEL ANALOG
MULTIPLEXER/DEMULTIPLEXER
—TOP VIEW—





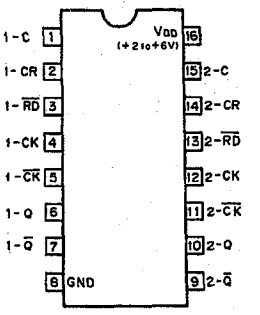
VEE*; VDD−VEE = +3to+12V
VEE ≦ GND

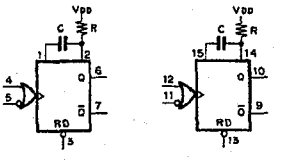
CONTROL INPUTS				ON CHANNEL		
EN	SELECT					
	C	B	A			
0	0	0	0	Z0	Y0	X0
0	0	0	1	Z0	Y0	X1
0	0	1	0	Z0	Y1	X0
0	0	1	1	Z0	Y1	X1
0	1	0	0	Z1	Y0	X0
0	1	0	1	Z1	Y0	X1
0	1	1	0	Z1	Y1	X0
0	1	1	1	Z1	Y1	X1
1	X	X	X	OPEN		

0; LOW LEVEL
1; HIGH LEVEL
X; DON'T CARE

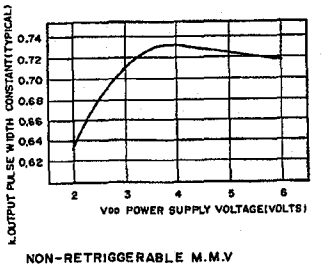
MC74HC4538AF (MOTOROLA) FLAT PACKAGE

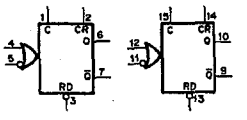
C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE
MONOSTABLE MULTIVIBRATOR
—TOP VIEW—





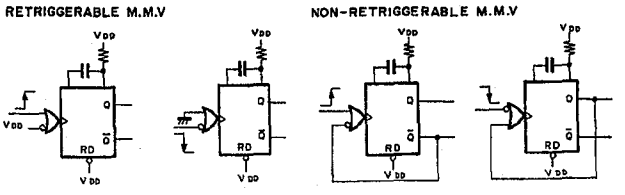
OUTPUT PULSE WIDTH = k·C·R





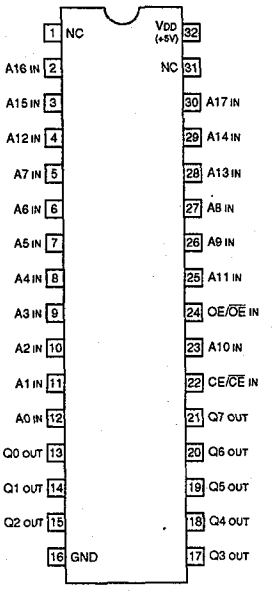
RETRIGGERABLE M.M.V

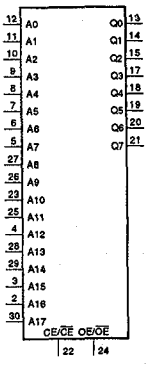
NON-RETRIGGERABLE M.M.V



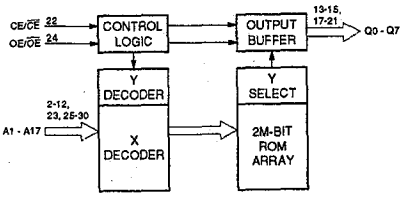
MX23C2000-MS00 (MACRONIX)

C-MOS 2M(256K x 8)-BIT MASK ROM
—TOP VIEW—



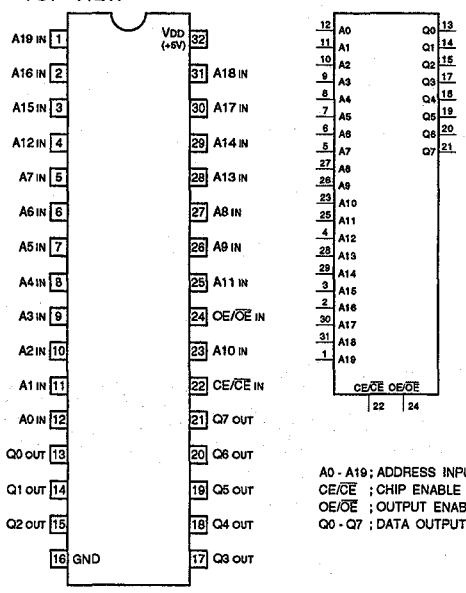


A0 - A17 ; ADDRESS INPUTS
CE/CE ; CHIP ENABLE INPUT
OE/OE ; OUTPUT ENABLE INPUT
Q0 - Q7 ; DATA OUTPUTS

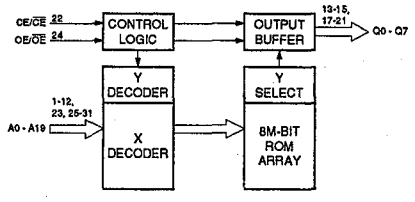


MX23C8000-MM00 (MACRONIX)

C-MOS 8M(1M x 8)-BIT MASK ROM
—TOP VIEW—

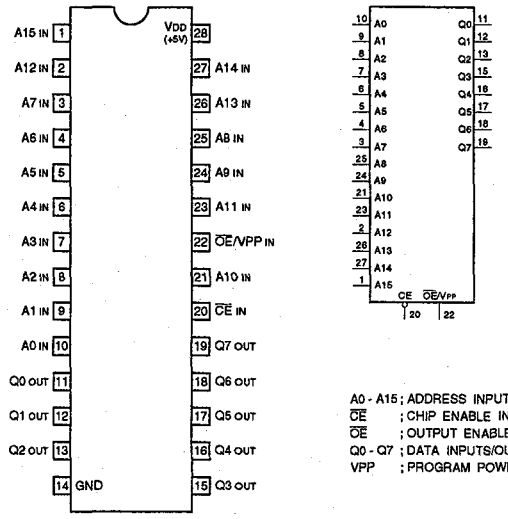


A0 - A19 ; ADDRESS INPUTS
CE/$\overline{CE}$; CHIP ENABLE INPUT
OE/$\overline{OE}$; OUTPUT ENABLE INPUT
Q0 - Q7 ; DATA OUTPUTS

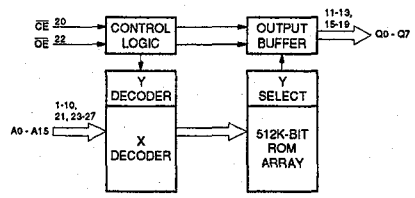


MX27C512DC-12 (MACRONIX)

C-MOS 512K(65,636K x 8)-BIT GATE PROCESS ERASABLE PROM
—TOP VIEW—

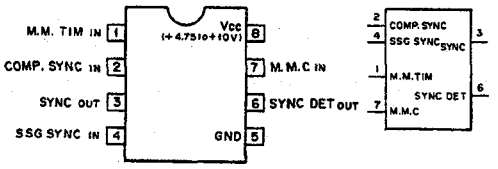


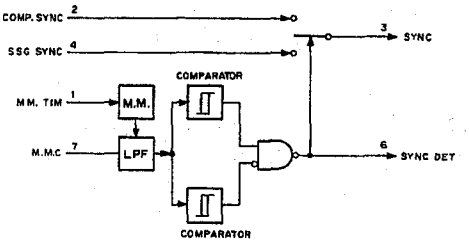
A0 - A15 ; ADDRESS INPUTS
$\overline{CE}$; CHIP ENABLE INPUT
$\overline{OE}$; OUTPUT ENABLE INPUT
Q0 - Q7 ; DATA INPUTS/OUTPUTS
VPP ; PROGRAM POWER SUPPLY



NJM2230M (JRC) FLAT PACKAGE

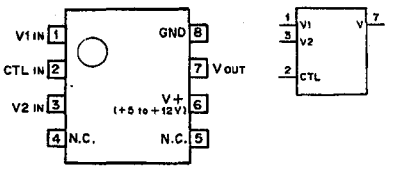
VIDEO SIGNAL DETECTOR
—TOP VIEW—

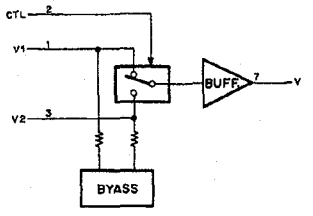




NJM2233BM (JRC) FLAT PACKAGE

2-INPUT VIDEO SIGNAL SWITCH
—TOP VIEW—



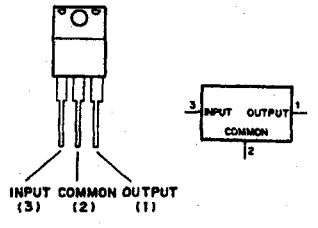


CTL	V
0	V1
1	V2

0 ; LOW LEVEL
1 ; HIGH LEVEL

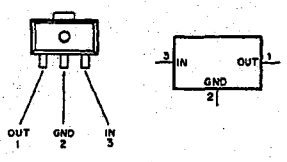
NJM7812FA (JRC) +12V(1 A)

POSITIVE VOLTAGE REGULATOR
—TOP VIEW—



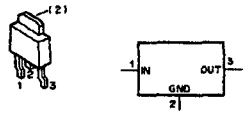
NJM78L09UA (JRC) +9V(100 mA)
NJM78L12UA (JRC) +12V(100 mA)

POSITIVE VOLTAGE REGULATOR
—SIDE VIEW—



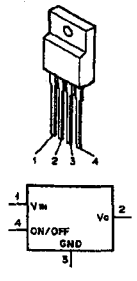
PQ05SZ1U (SHARP) +5V 1A

POSITIVE VOLTAGE REGULATOR
—SIDE VIEW—



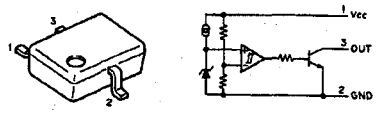
PQ30RV11 (SHARP) VARIABLE 1A

POSITIVE VOLTAGE REGULATOR
—SIDE VIEW—



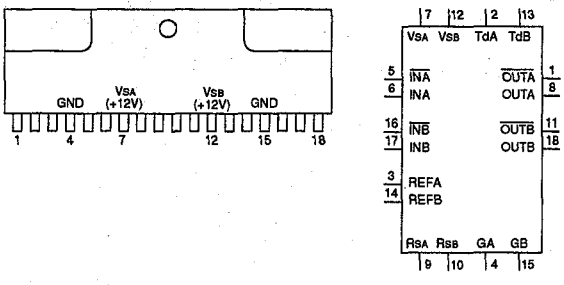
PST572CMT (MITSUMI) Vs=4.5V

VOLTAGE DETECTOR,SYSTEM RESET



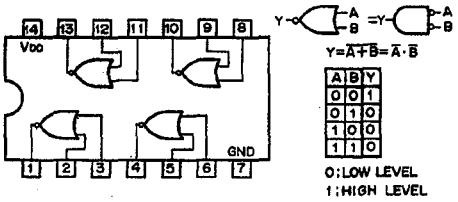
SLA7024M (SANKEN)

STEPPING MOTER UNIPOLAR DRIVING
—SIDE VIEW—



SN74HC02ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT NOR GATE
—TOP VIEW—

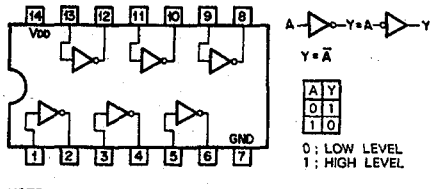


NOTE :

TYPE	VDD
HC	+2 to +6V
AC/VHC	+2 to +5.5V
HCT/ACT	+5V

SN74HC04ANS (TI) FLAT PACKAGE

C-MOS HEX INVERTERS
—TOP VIEW—

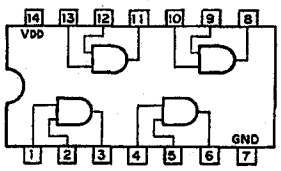


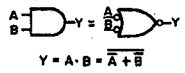
NOTE :

TYPE	VDD
74HCT04 TYPE	+5V
TC74AC04 TYPE TC74VHC04 TYPE	+2 to +5.5V
74ACT04 TYPE	+4.5 to +5.5V
OTHER TYPES	+2 to +6V

SN74HC08ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT AND GATE
—TOP VIEW—





A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

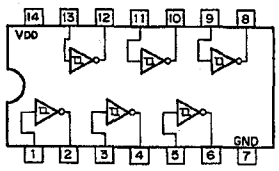
0 ; LOW LEVEL
1 ; HIGH LEVEL

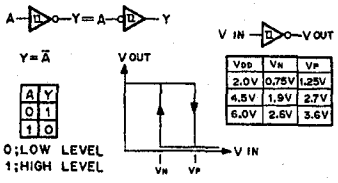
NOTE :

TYPE	V_{DD}
TC74AC08 TYPE MC74ACT08M	+ 2 to + 5.5V
TC40H	+ 2 to + 8V
OTHER TYPES	+ 2 to + 6V

SN74HC14ANS (TI) FLAT PACKAGE

HEX SCHMITT TRIGGER INVERTERS
—TOP VIEW—





A	Y
0	1
1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

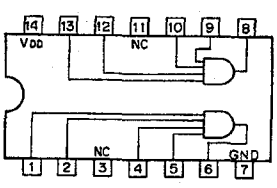
V_{DD}	V_N	V_P
2.0V	0.75V	1.25V
4.5V	1.9V	2.7V
6.0V	2.5V	3.6V

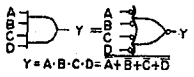
NOTE :

TYPE	V_{DD}
TC74AC/VHC	+2 to +5.5V
OTHER TYPES	+2 to +6V

SN74HC21ANS (TI) FLAT PACKAGE

C-MOS DUAL 4-INPUT POSITIVE AND GATE
—TOP VIEW—





A	B	C	D	Y
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
:	:	:	:	:
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

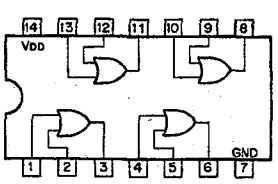
0 ; LOW LEVEL
1 ; HIGH LEVEL

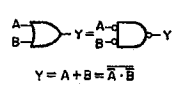
NOTE :

TYPE	V_{DD}
HC	+2 to +6V
VHC	+2 to +5.5V

SN74HC32ANS (TI) FLAT PACKAGE

C-MOS QUAD 2-INPUT OR GATE
—TOP VIEW—





A	B	Y
0	0	0
0	1	1
1	0	1
1	1	1

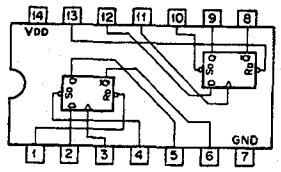
0 : LOW LEVEL
1 ; HIGH LEVEL

NOTE :

TYPE	V_{DD}
AC/VHC	+2 to +5.5V
HC	+2 to +6V

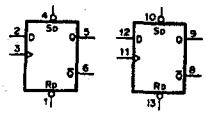
SN74HC74ANS (TI) FLAT PACKAGE

C-MOS DUAL D-TYPE FLIP-FLOPS
WITH DIRECT SET/RESET
—TOP VIEW—



INPUTS				OUTPUTS	
$\overline{S_D}$	$\overline{R_D}$	CK	D	Q_{n+1}	$\overline{Q_{n+1}}$
0	1	X	X	1	0
1	0	X	X	0	1
0	0	X	X	1	1
1	1	↑	1	1	0
1	1	↑	0	0	1
1	1	0	X	Q_n	$\overline{Q_n}$

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

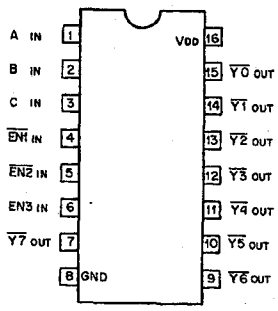


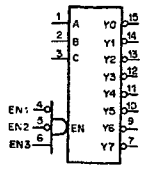
NOTE :

TYPE	V_{DD}
HCT/ACT	+5V
TC74AC/VHC	+2 to +5.5V
OTHERS	+2 to +6V

SN74HC138ANS (TI) FLAT PACKAGE

C-MOS 3-TO-8 LINE DECODER/DEMULTIPLEXER
—TOP VIEW—





INPUTS				OUTPUTS							
EN	C	B	A	Y7	Y6	Y5	Y4	Y3	Y2	Y1	Y0
0	X	X	X	1	1	1	1	1	1	1	1
1	0	0	0	1	1	1	1	1	1	1	0
1	0	0	1	1	1	1	1	1	1	0	1
1	0	1	0	1	1	1	1	1	0	1	1
1	0	1	1	1	1	1	1	0	1	1	1
1	1	0	0	1	1	1	0	1	1	1	1
1	1	0	1	1	1	0	1	1	1	1	1
1	1	1	0	1	0	1	1	1	1	1	1
1	1	1	1	0	1	1	1	1	1	1	1

EN = $\overline{EN1}\cdot\overline{EN2}\cdot EN3$

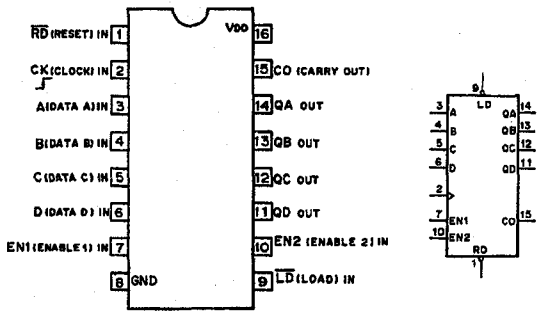
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

NOTE :

TYPE	V_{DD}
74HCT138 TYPE	+5V
74ACT138 TYPE	+4.5 to +5.5V
TC74AC138 TYPE TC74VHC138	+2 to +5.5V
OTHER TYPES	+2 to +6V

SN74HC161ANS (TI) FLAT PACKAGE

C-MOS SYNCHRONOUS PRESETTABLE 4-BIT BINARY COUNTER —TOP VIEW—



MODE SELECTION

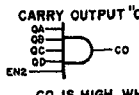
CONTROL INPUTS				MODE
Ro	LD	EN1	EN2	
0	X	X	X	RESET (ASYNCHRONOUS)
1	0	X	X	PRESET (SYNCHRONOUS)
1	1	0	X	NO COUNT
1	1	X	0	NO COUNT
1	1	1	1	COUNT

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

COUNT SEQUENCE

COUNT	OUTPUTS			
	QD	QC	QB	QA
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
10	1	0	1	0
11	1	0	1	1
12	1	1	0	0
13	1	1	0	1
14	1	1	1	0
15	1	1	1	1

CARRY OUTPUT "CO"



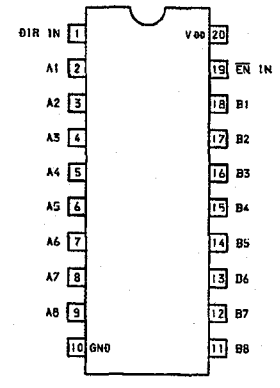
CO IS HIGH WHEN EN2 INPUT IS HIGH AND COUNT IS "15".

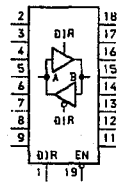
NOTE :

TYPE	VDD
74ACT	+5V
TC40H	+2 to +8V
OTHERS	+2 to +6V

SN74HC245ANS (TI) FLAT PACKAGE

C-MOS BILATERAL BUS TRANSCEIVERS WITH 2-STATE OUTPUT —TOP VIEW—



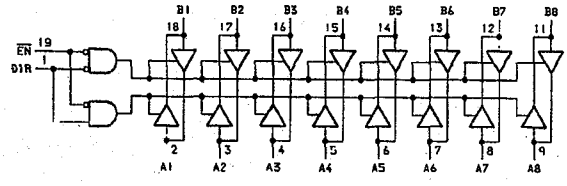


EN	DIR	OPERATION
0	0	B to A
0	1	A to B
1	X	HI-Z

0 : LOW LEVEL
1 : HIGH LEVEL
X : DON'T CARE
HI-Z : HIGH IMPEDANCE

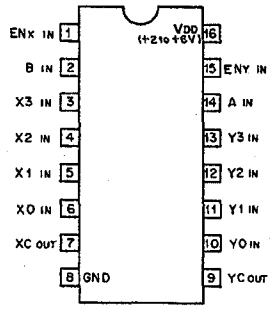
NOTE :

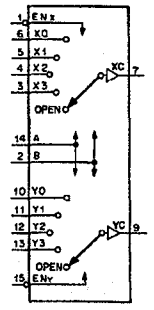
TYPE	VDD
AC HC	+2 to +6V
ABT ACT BCT HCT	+5V
TC74AC245F TC74AC245P TC74VHC245	+2 to +5.5V
74LVT	+2.7 to +3.6V



SN74HC253ANS (TI) FLAT PACKAGE

C-MOS 4-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER —TOP VIEW—



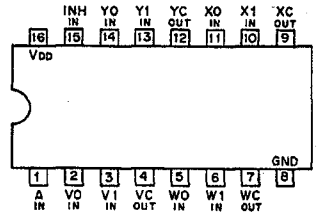


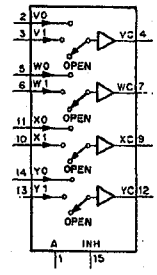
CONTROL IN			ON CHANNEL
EN	B	A	
0	0	0	0
0	0	1	1
0	1	0	2
0	1	1	3
1	X	X	OPEN

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

SN74HC257ANS (TI) FLAT PACKAGE

C-MOS 2-LINE-TO-1-LINE DATA SELECTOR/MULTIPLEXER —TOP VIEW—





CONT. IN		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	OPEN

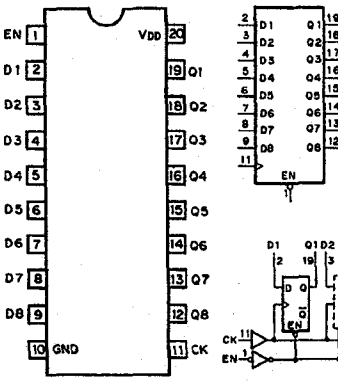
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

NOTE :

TYPE	VDD
74AC/74HC	+2 to +6V
74ACT	+5V
TC74AC257F	+2 to +5.5V

SN74HC574ANS (TI) FLAT PACKAGE

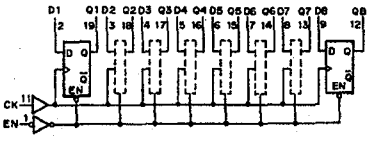
C-MOS 3-STATE D-TYPE EDGE-TRIGGERED FLIP-FLOP —TOP VIEW—



EACH FLIP-FLOP

INPUTS			OUT
EN	CK	D	Q
0	↑	1	1
0	↑	0	0
0	↓	X	Q0
1	X	X	HI-Z

0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE
HI-Z ; HIGH IMPEDANCE
Q0 ; NO CHANGE

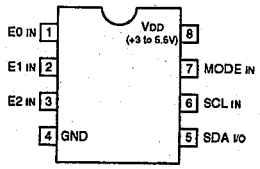


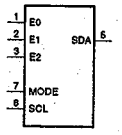
NOTE :

TYPE	VDD
74AC/74HC	+2 to +6V
74ACT/74FCT /74HCT	+5V
TC74AC574F TC74VHC574	+2 to +5.5V

ST24C01M1 (SGS)

C-MOS SERIAL ACSESS 1K(128 x 8)-BIT EEPROM
—TOP VIEW—

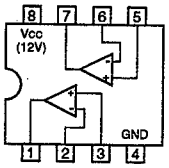




E0 - E2 ; CHIP ENABLE INPUTS
MODE ; WRITE MODE INPUT
SCL ; SERIAL CLOCK INPUT
SDA ; SERIAL DATA ADDRESS INPUT/OUTPUT

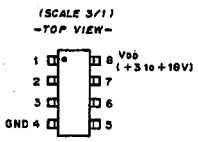
TA75358F

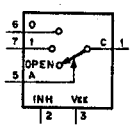
DUAL OPERATIONAL AMPLIFIER
—TOP VIEW—



TC4W53F (TOSHIBA) CHIP PACKAGE

C-MOS 2-CHANNEL MULTIPLEXER/DEMULTIPLEXER
—TOP VIEW—



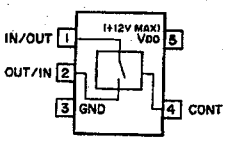


0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

CONT. INPUT		ON CHANNEL
INH	A	
0	0	0
0	1	1
1	X	OPEN

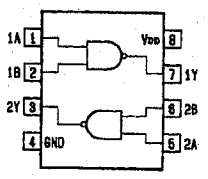
TC7S66F (TOSHIBA)

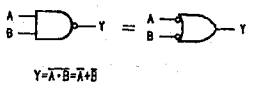
C-MOS ANALOG SWITCH
—TOP VIEW—



TC7W00F (TOSHIBA)

C-MOS 2-INPUT NAND GATE
—TOP VIEW—





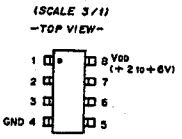
$Y=\overline{A \cdot B}=\overline{A}+\overline{B}$

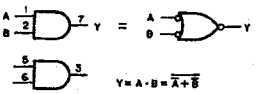
A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TC7W08F (TOSHIBA)CHIP PACKAGE

C-MOS 2-INPUT AND GATE
—TOP VIEW—





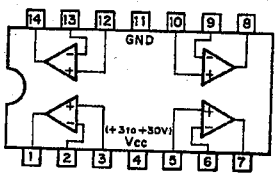
$Y = A \cdot B = \overline{\overline{A}+\overline{B}}$

A	B	Y
0	0	0
0	1	0
1	0	0
1	1	1

0 ; LOW LEVEL
1 ; HIGH LEVEL

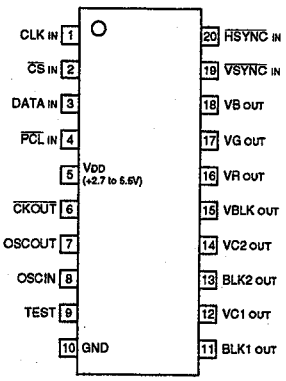
UPC324G2 (NEC) FLAT PACKAGE

QUAD OPERATIONAL AMPLIFIERS
—TOP VIEW—



UPD6461GS-701-GLG (NEC) FLAT PACKAGE

C-MOS ON-SCREEN CHARACTER DISPLAY —TOP VIEW—



INPUT

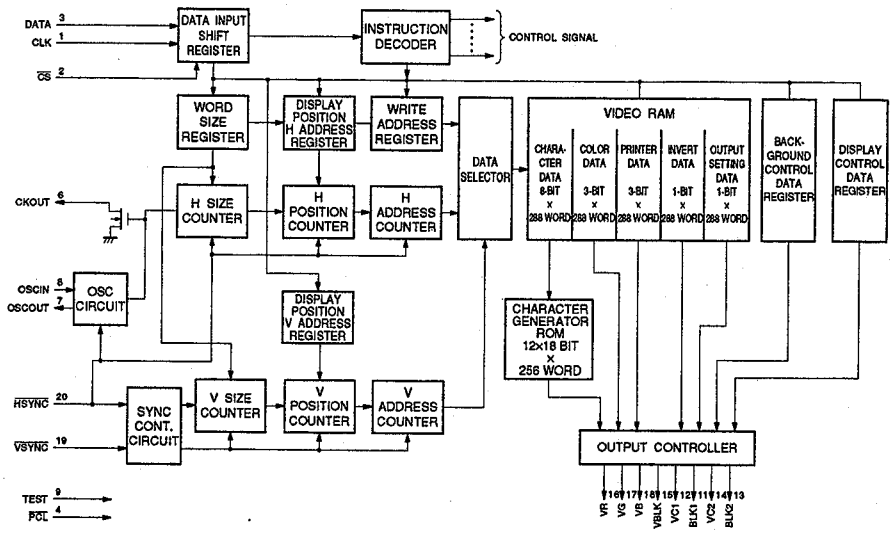
CLK	; CLOCK
$\overline{CS}$	; CHIP SELECT
DATA	; SERIAL DATA
$\overline{HSYNC}$	; HORIZONTAL SYNC
OSCIN	; OSCILLATOR
$\overline{PCL}$	; POWER ON CLEAR
$\overline{VSYNC}$	; VERTICAL SYNC

OUTPUT

BLK1	; BLANKING 1
BLK2	; BLANKING 2
$\overline{CKOUT}$	; CLOCK
OSCOUT	; OSCILLATOR
VB	; CHARACTER
VBLK	; BLANKING
VC1	; CHARACTER 1
VC2	; CHARACTER2
VG	; CHARACTER
VR	; CHARACTER

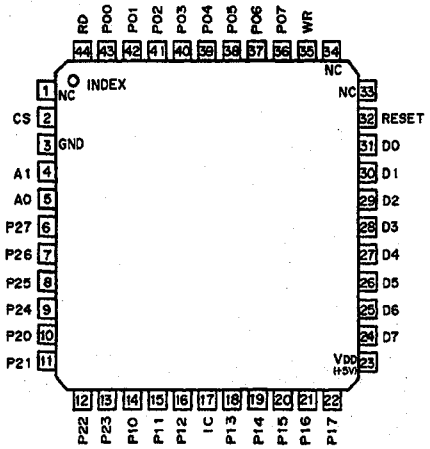
OTHER

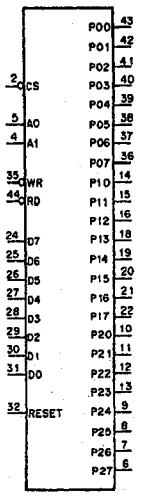
TEST ; TEST

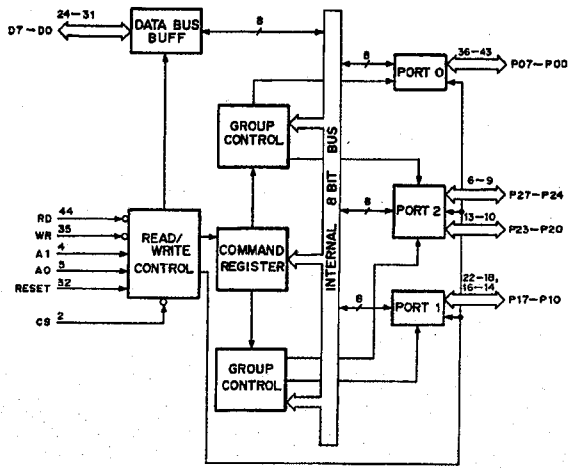


UPD71055GB-3B4 (NEC) FLAT PACKAGE

C-MOS PARALLEL INTERFACE UNIT —TOP VIEW—







A1 A0 ; ADDRESS
CS ; CHIP SELECT
D7 – D0 ; DATA BUS
P07 – P00 ; PORT 0

P17 – P10 ; PORT 1
P27 – P20 ; PORT 2
RD ; READ STROBE
WR ; WRITE STROBE

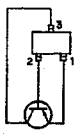
IC ; INTERNALLY CONNECTED

CS	RD	WR	A1	A0	OPERATION	CPU ACTION
0	0	1	0	0	PROT0 → DATA-BUS	INPUT
0	0	1	0	1	PROT1 → DATA-BUS	INPUT
0	0	1	1	0	PROT2 → DATA-BUS	INPUT
0	0	1	1	1	DISABLE	
0	0	0	X	X		
0	1	0	0	0	DATA-BUS → PROT0	OUTPUT
0	1	0	0	1	DATA-BUS → PROT1	OUTPUT
0	1	0	1	0	DATA-BUS → PROT2	OUTPUT
0	1	0	1	1	DATA-BUS → COMMAND REGISTER	OUTPUT
0	1	1	X	X	HIGH IMPEDANCE	
1	X	X	X	X		

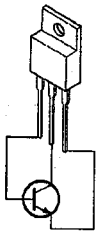
0 ; LOW LEVEL
1 ; HIGH LEVEL
X ; DON'T CARE

2SA1162
2SA1226
2SA812-M5

(SCALE 4/1)
TOP VIEW

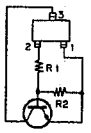


2SC3456M



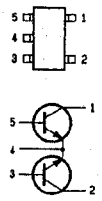
DTC124EK
DTC143TK
DTC144EK

TOP VIEW (SCALE 4/1)

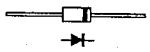


XN1501
XN2501

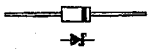
(SCALE 6/1)
TOP VIEW



10E-2
D1F60
D1LN20
D2FS4
ERB37-10
S3V40

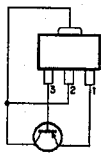


D1NS4



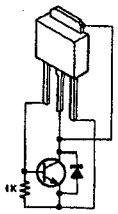
2SB798-DK

(SCALE 4/1)
TOP VIEW



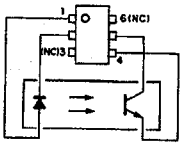
2SD992-Z

(SCALE 2/1)

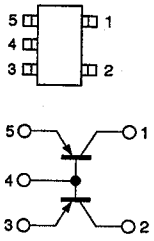


PC111YS

TOP VIEW (SCALE 2/1)

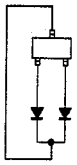


XN2401

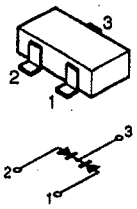


1S2837

(SCALE 4/1)
TOP VIEW

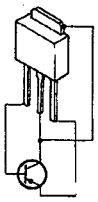


D2S4M



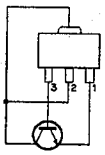
2SB962Z-E

(SCALE 2/1)

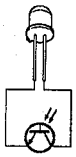


2SD999-CLCK

TOP VIEW (SCALE 4/1)

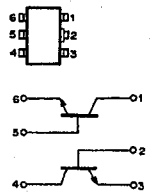


PT501



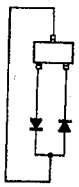
XN4501

(SCALE 6/1)
TOP VIEW

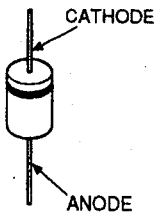


1SS226

(SCALE 4/1)
TOP VIEW

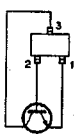


D5SC4M

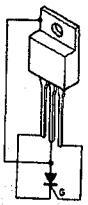


2SC1623
2SC1623-L6
2SC3735-L-B35

(SCALE 4/1)
TOP VIEW



5P4M

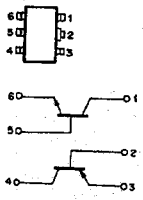


PT480F

(SCALE 3/1)

XN4601

(SCALE 6/1)
TOP VIEW



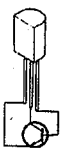
1SS352
1T362A

(SCALE 6/1)
TOP VIEW

GL480

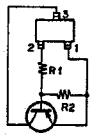
(SCALE 3/1)

2SC2655Y



DTA124EK

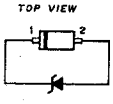
TOP VIEW (SCALE 4/1)



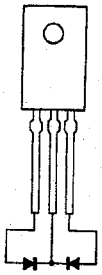
N13T1

02DZ7.5-TPH3

(SCALE 4/1)
TOP VIEW

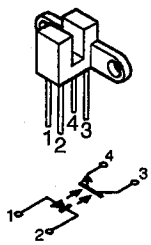


D10SC4M

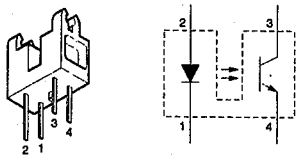


GL514

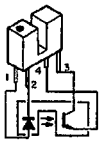
GP1S51



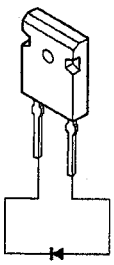
RPI-5100



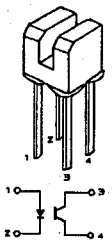
GP1S54



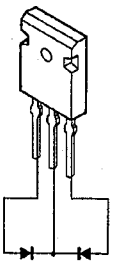
S20L60



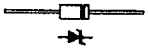
GP2S40K



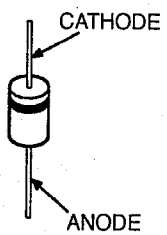
S20LC20U



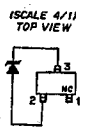
HZ ? ?
HZS ? ?L
HZS ? ?C-1



S2L20U



HZM ? ?NB ?
RD9.1M-B1



SECTION 5
EXPLODED VIEWS

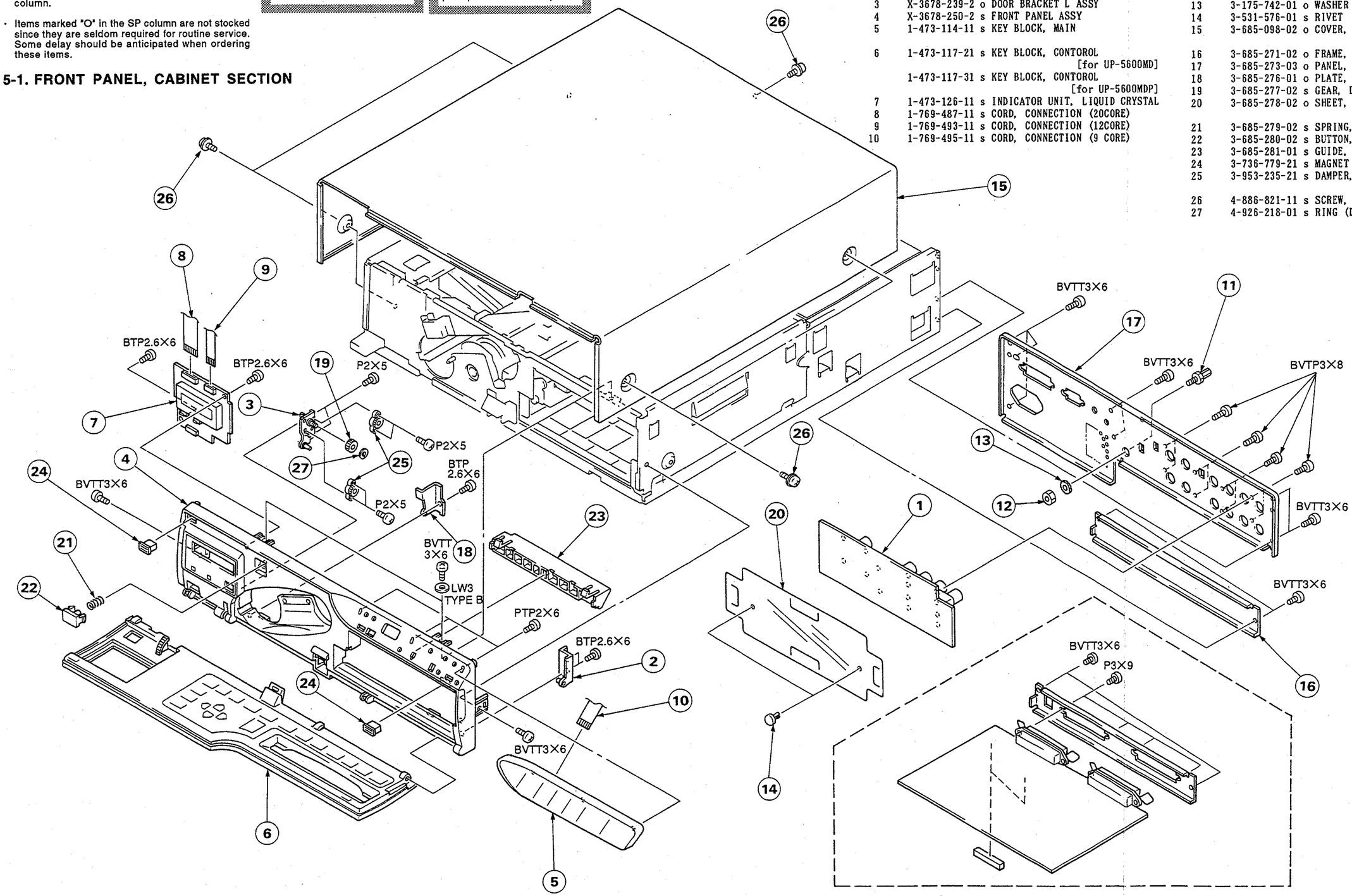
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "O" in the SP column are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

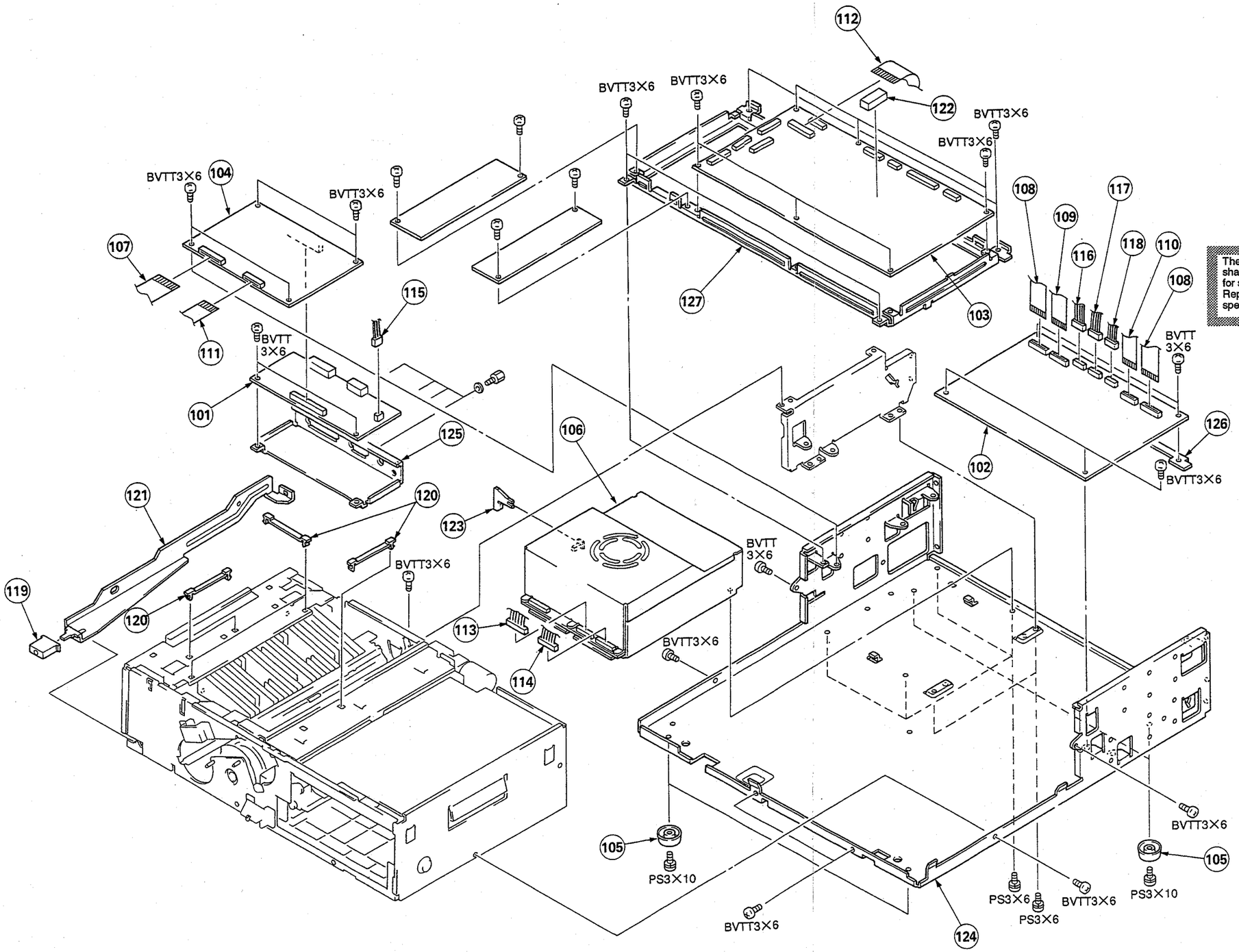
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

5-1. FRONT PANEL, CABINET SECTION



No.	Part No.	SP	Description
1	A-8310-480-A	o	MOUNTED CIRCUIT BOARD, IF-31
2	X-3678-238-2	o	DOOR BRACKET R ASSY
3	X-3678-239-2	o	DOOR BRACKET L ASSY
4	X-3678-250-2	s	FRONT PANEL ASSY
5	1-473-114-11	s	KEY BLOCK, MAIN
6	1-473-117-21	s	KEY BLOCK, CONTOROL [for UP-5600MD]
	1-473-117-31	s	KEY BLOCK, CONTOROL [for UP-5600MDP]
7	1-473-126-11	s	INDICATOR UNIT, LIQUID CRYSTAL
8	1-769-487-11	s	CORD, CONNECTION (20CORE)
9	1-769-493-11	s	CORD, CONNECTION (12CORE)
10	1-769-495-11	s	CORD, CONNECTION (9 CORE)
11	3-175-740-01	o	TERMINAL
12	3-175-741-01	o	NUT
13	3-175-742-01	o	WASHER
14	3-531-576-01	s	RIVET
15	3-685-098-02	o	COVER, TOP
16	3-685-271-02	o	FRAME, REAR
17	3-685-273-03	o	PANEL, REAR
18	3-685-276-01	o	PLATE, STOPPER
19	3-685-277-02	s	GEAR, DAMPER
20	3-685-278-02	o	SHEET, IF SHIELD
21	3-685-279-02	s	SPRING, COMPRESSION (BUTTON)
22	3-685-280-02	s	BUTTON, CARTRIDGE
23	3-685-281-01	s	GUIDE, FRONT PAPER
24	3-736-779-21	s	MAGNET
25	3-953-235-21	s	DAMPER, OIL
26	4-886-821-11	s	SCREW, M3 CASE
27	4-926-218-01	s	RING (DIA.2), RETAINING

5-2. CHASSIS SECTION

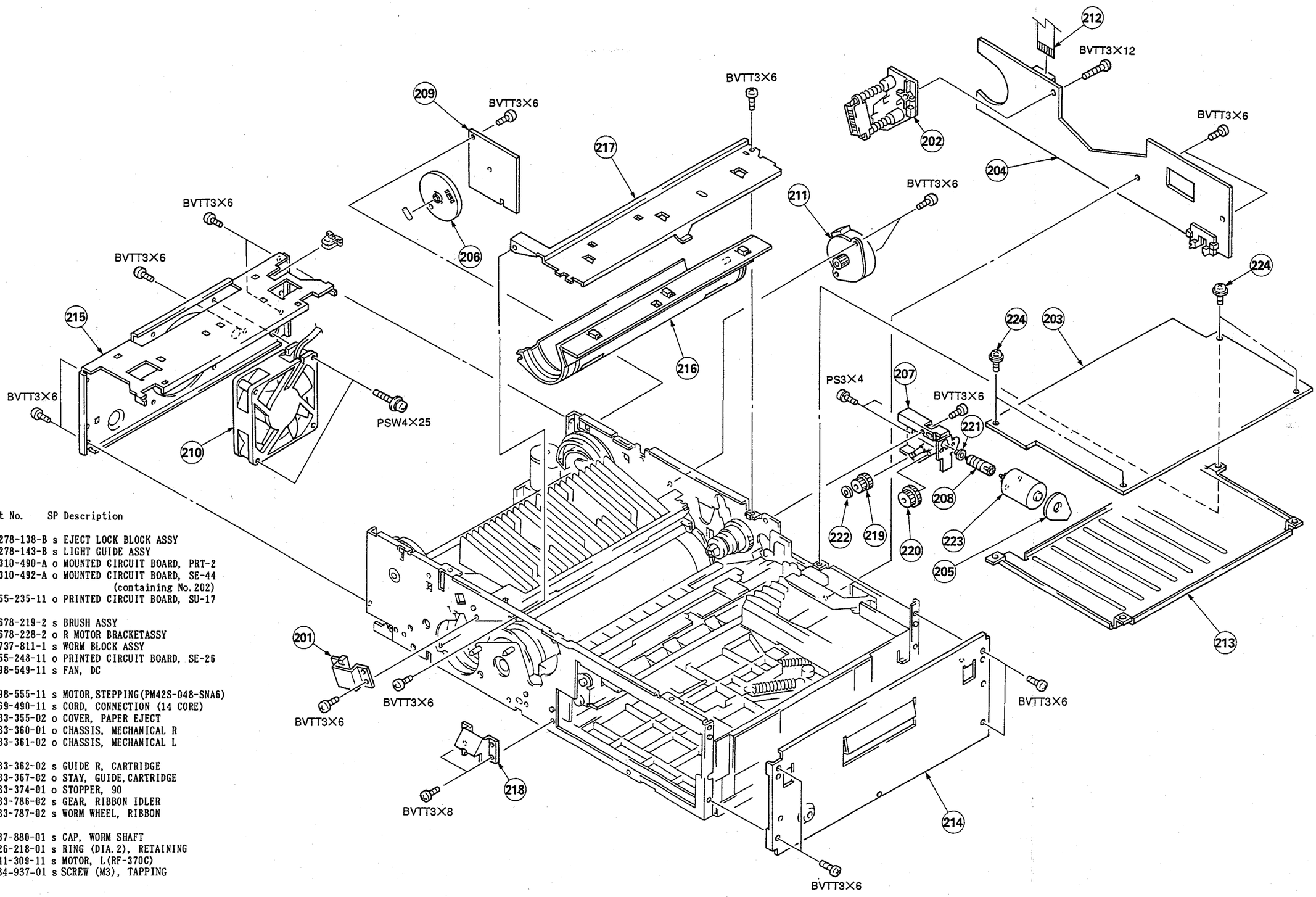


The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

No.	Part No.	SP	Description
101	A-8310-482-A	o	MOUNTED CIRCUIT BOARD, IF-35
102	A-8310-484-A	o	MOUNTED CIRCUIT BOARD, VA-7
103	A-8310-486-A	o	MOUNTED CIRCUIT BOARD, FMY-17
104	A-8310-488-A	o	MOUNTED CIRCUIT BOARD, SY-11
105	X-3566-109-0	s	MF FOOT ASSY
106 ⚠	1-468-006-11	o	SWITCHING REGURATOR
107	1-769-481-11	s	WIRE (FLAT TYPE)(18 CORE)
108	1-769-488-11	s	CORD, CONNECTION (18CORE)
109	1-769-489-11	s	CORD, CONNECTION (17CORE)
110	1-769-491-11	s	CORD, CONNECTION (12CORE)
111	1-769-496-11	s	CORD, CONNECTION(13 CORE FLAT)
112	1-769-497-11	s	CORD, CONNECTION(25 CORE FLAT)
113	1-954-331-11	o	HARNESS, SUB (PWR-IF)
114	1-954-332-11	o	HARNESS, SUB (PWR-PRT)
115	1-954-333-11	o	HARNESS, SUB (IF31-35)
116	1-954-334-12	o	HARNESS, SUB (VA-SY10)
117	1-954-335-12	o	HARNESS, SUB (VA-SY12)
118	1-954-336-12	o	HARNESS, SUB (VA-IF10)
119	2-431-568-31	s	BUTTON, POWER
120	3-683-366-01	o	CLAMP HARNESS
121	3-685-099-02	o	ROD, POWER SWITCH
122	3-685-232-01	o	SPACER, VI
123	3-685-270-01	s	STOPPER, ROD
124	3-685-272-02	o	FRAME, BASE
125	3-685-289-01	o	FRAME, IF
126	3-685-290-02	o	FRAME, VA
127	3-685-291-02	o	FRAME, FMY
128	2-389-320-01	s	RUBBER, SPACER
129	A-8310-602-A	o	MOUNTED CIRCUIT BOARD, FMY-19 [for UP-5600MDP only]

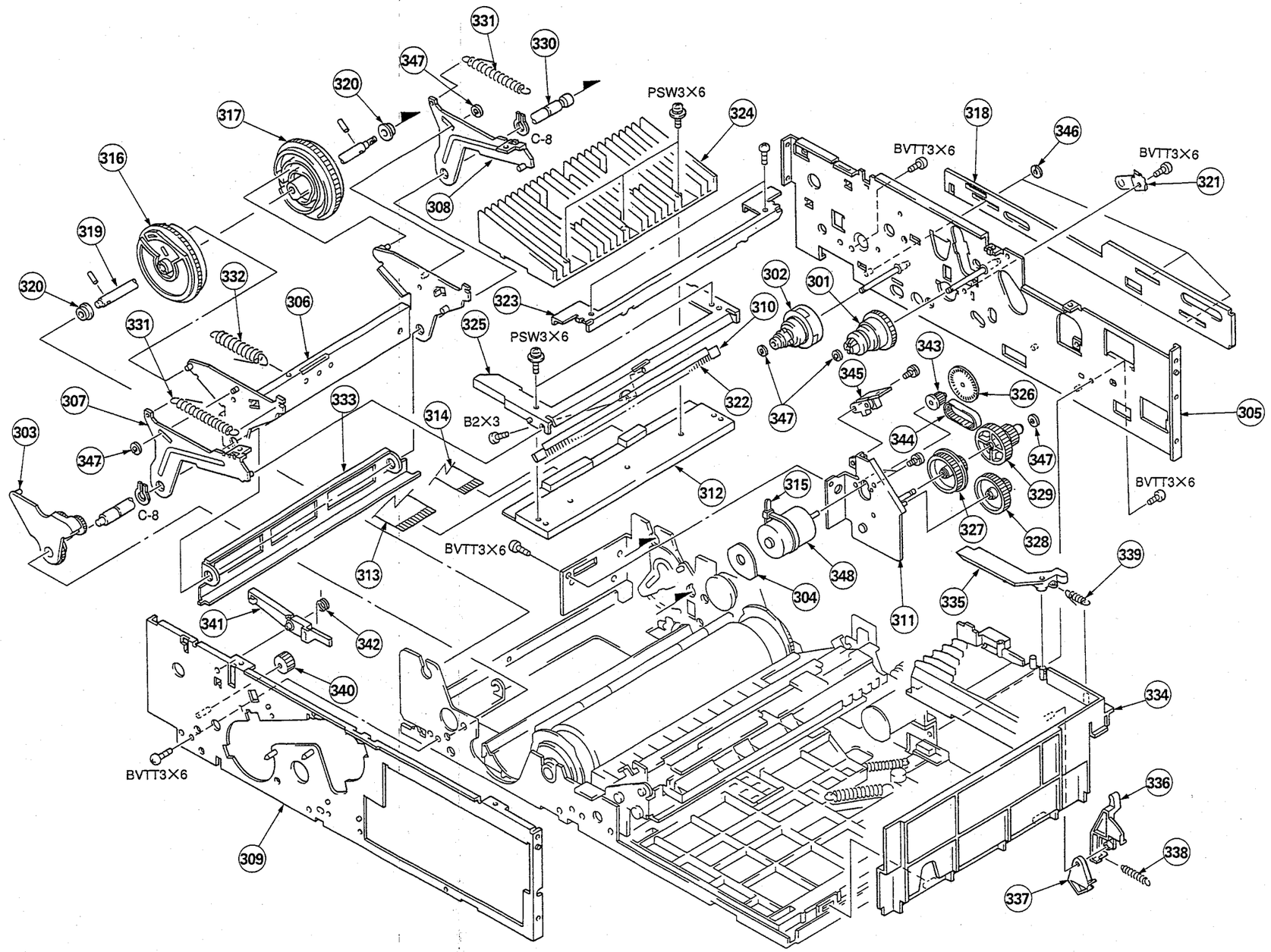
5-3. MECHANISM SECTION (1)



No.	Part No.	SP		Description
201	A-8278-138-B	s		EJECT LOCK BLOCK ASSY
202	A-8278-143-B	s		LIGHT GUIDE ASSY
203	A-8310-490-A	o		MOUNTED CIRCUIT BOARD, PRT-2
204	A-8310-492-A	o		MOUNTED CIRCUIT BOARD, SE-44 (containing No.202)
205	1-655-235-11	o		PRINTED CIRCUIT BOARD, SU-17
206	X-3678-219-2	s		BRUSH ASSY
207	X-3678-228-2	o		R MOTOR BRACKETASSY
208	X-3737-811-1	s		WORM BLOCK ASSY
209	1-655-248-11	o		PRINTED CIRCUIT BOARD, SE-26
210	1-698-549-11	s		FAN, DC
211	1-698-555-11	s		MOTOR, STEPPING(PM42S-048-SNA6)
212	1-769-490-11	s		CORD, CONNECTION (14 CORE)
213	3-683-355-02	o		COVER, PAPER EJECT
214	3-683-360-01	o		CHASSIS, MECHANICAL R
215	3-683-361-02	o		CHASSIS, MECHANICAL L
216	3-683-362-02	s		GUIDE R, CARTRIDGE
217	3-683-367-02	o		STAY, GUIDE, CARTRIDGE
218	3-683-374-01	o		STOPPER, 90
219	3-683-786-02	s		GEAR, RIBBON IDLER
220	3-683-787-02	s		WORM WHEEL, RIBBON
221	3-737-880-01	s		CAP, WORM SHAFT
222	4-926-218-01	s		RING (DIA.2), RETAINING
223	1-541-309-11	s		MOTOR, L(RF-370C)
224	4-034-937-01	s		SCREW (M3), TAPPING

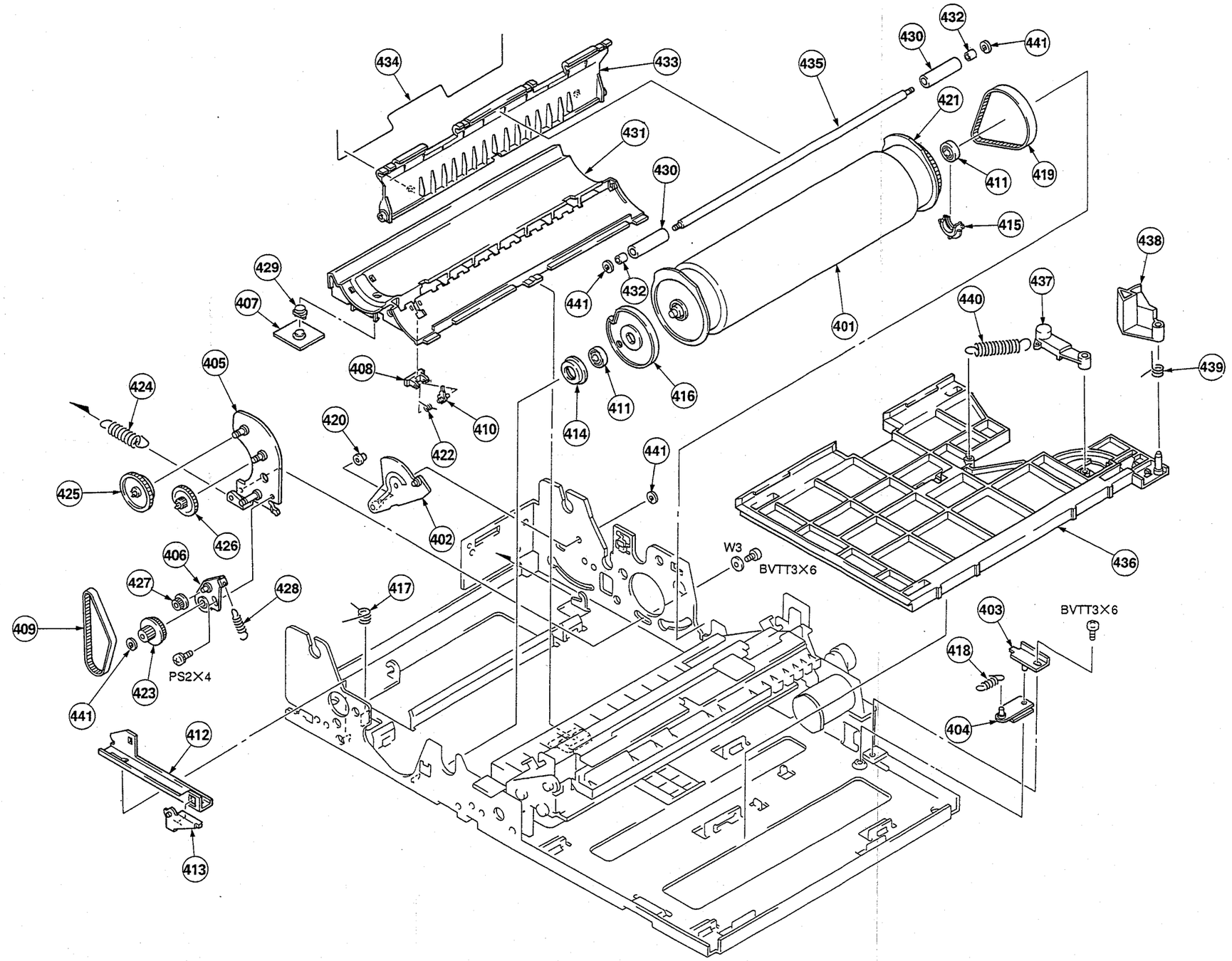
5-4. MECHANISM SECTION (2)

No.	Part No.	SP	Description
301	A-8278-110-A	s	R TAKE UPGEAR BLOCK ASSY
302	A-8278-111-A	s	R LIMITER ASSY
303	A-8278-145-A	s	BC LINK ASSY
304	1-655-236-11	o	PRINTED CIRCUIT BOARD, SU-18
305	X-3678-229-2	o	MECHANICAL CHASSIS B ASSY
306	X-3678-234-2	o	HEAD LINK ASSY
307	X-3678-235-2	o	HEAD PRESS PLATE F ASSY
308	X-3678-236-2	o	HEAD PRESS PLATE B ASSY
309	X-3678-237-3	o	MECHANICAL CHASSIS F ASSY
310	X-3678-259-1	s	RIBBON GUIDE ASSY
311	X-3678-275-1	o	SYSTEM BRACKET ASSY
312	1-500-199-11	s	HEAD, THERMAL (LV5412)
313	1-769-480-11	s	WIRE (FLAT TYPE)(28 CORE)
314	1-769-482-11	s	WIRE(FLAT TYPE)(18 CORE)
315	3-655-653-11	s	BAND (TAITON), BINDING
316	3-683-351-02	s	CAM, SYSTEM F
317	3-683-352-02	s	CAM, SYSTEM B
318	3-683-356-02	s	LINK, GLOBAL
319	3-683-358-01	s	SHAFT, CAM
320	3-683-368-01	s	BEARING, CAM
321	3-683-370-01	s	SPRING A, PLATEN EARTH
322	3-683-371-01	s	ELIMINATOR, STATIC ELECTRICITY
323	3-683-372-03	o	HEAD PRESSURE
324	3-683-387-02	o	HEAT SINK
325	3-683-388-02	o	HOLDER, HEAD
326	3-173-567-02	s	FIN, FG
327	3-686-319-01	s	GEAR PULLEY, SYSTEM
328	3-686-320-01	s	GEAR A, SYSTEM
329	3-686-321-01	s	GEAR B, SYSTEM
330	3-683-862-01	o	SHAFT A, HEAD LINK
331	3-683-863-01	s	SPRING, EXTENSION (HEAD PRESS)
332	3-683-864-01	s	SPRING, EXTENSION (HEAD LINK)
333	3-683-865-02	s	LINK A, CHUCK
334	3-683-874-01	o	BASE, PAPER EJECT
335	3-683-875-01	s	LEVER, PAPER EJECT
336	3-683-876-02	s	LINK A, PAPER EJECT
337	3-683-877-01	s	LINK B, PAPER EJECT
338	3-683-878-02	s	SPRING, EXTENSION, PE LINK
339	3-683-879-01	s	SPRING, EXTENSION, PE LEVER
340	3-683-885-01	s	GEAR, BC IDLER
341	3-683-886-02	s	EJECT PROTECTOR
342	3-683-887-01	s	SPRING, TORSION (PROTECT)
343	3-686-299-02	s	PULLEY, SYSTEM MOTOR
344	3-686-322-01	s	BELT, 72TN15
345	1-655-238-11	o	PRINTED CIRCUIT BOARD, SE-54
346	4-862-338-00	s	RING, STOPPER
347	4-926-218-01	s	RING (DIA.2), RETAINING
348	1-541-309-11	s	MOTOR, L(RF-370C)

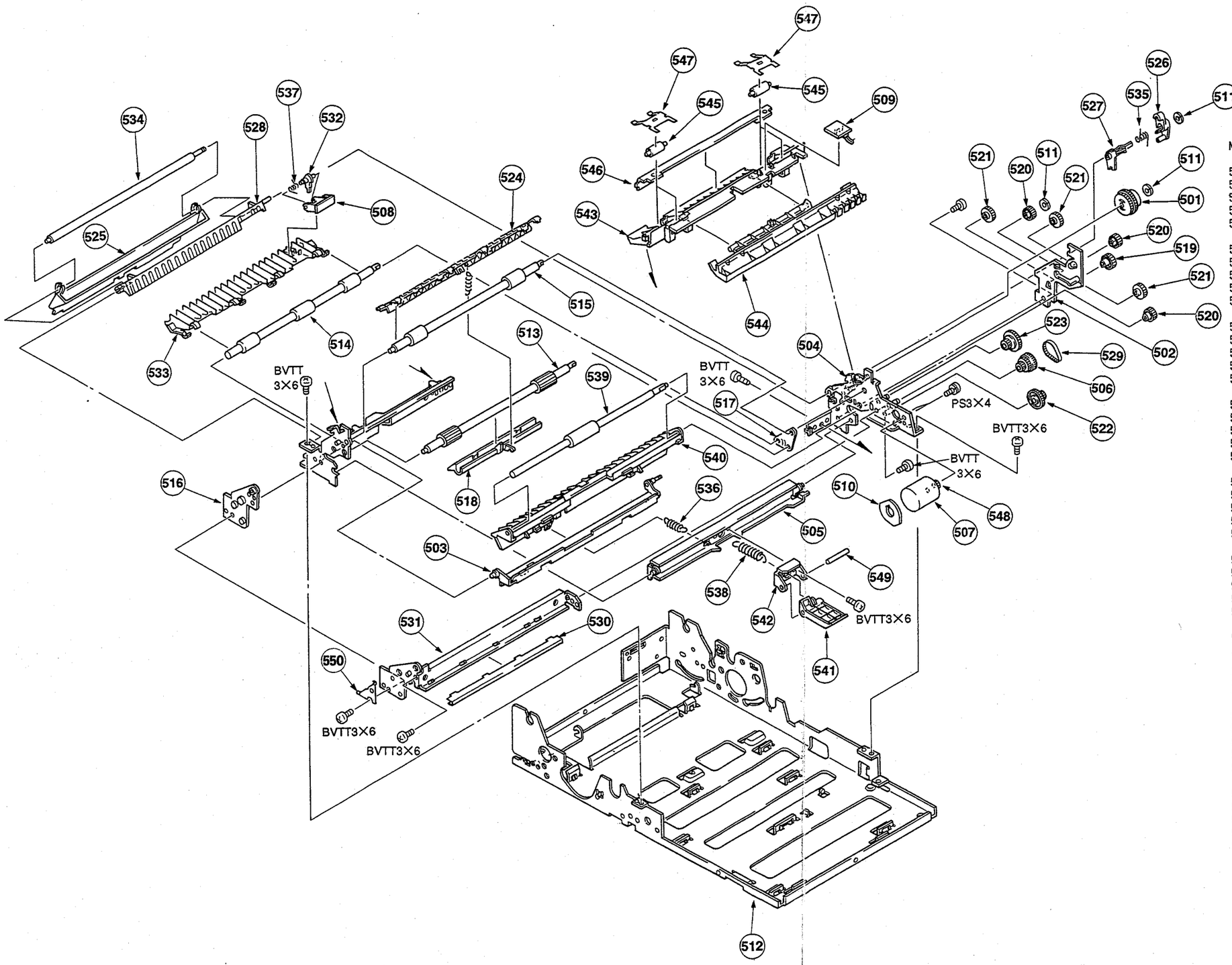


5-5. MECHANISM SECTION (3)

No.	Part No.	SP	Description
401	A-8310-514-A	s	PLATEN BLOCK ASSY
402	X-3678-216-1	o	SYSTEM LINK ASSY
403	X-3678-217-1	o	TRAY LOCK STAY ASSY
404	X-3678-218-1	o	TRAY LOCK PLATE ASSY
405	X-3678-226-1	o	PLATEN GEAR BRACKET ASSY
406	X-3678-227-2	o	BELT TENSIONER ASSY
407	1-655-232-11	o	PRINTED CIRCUIT BOARD, SE-47
408	1-655-237-11	o	PRINTED CIRCUIT BOARD, SE-53
409	3-174-267-02	s	BELT, 110 TN
410	3-683-044-01	s	PLATE, SUPPLY SENSOR
411	3-683-140-01	o	FLANGELESS BALL BEARING
412	3-683-353-01	s	LINK B, CHUCK
413	3-683-354-01	s	LINK C, CHUCK
414	3-683-357-02	s	HOLDER F, BEARING
415	3-683-359-02	s	HOLDER B, BEARING
416	3-683-363-01	s	CAM, CHUCK TIMING
417	3-683-365-01	s	SPRING, TORSION (CHUCK LINK)
418	3-683-369-01	s	SPRING, EXTENSION, TRAY LOCK
419	3-683-373-01	s	BELT, 180TN
420	3-683-376-01	s	SLEEVE
421	3-683-380-02	s	FLANGE B
422	3-683-691-01	s	SPRING, HELICAL TORSION(SENSOR)
423	3-683-774-01	s	GEAR PULLEY A, PLATEN
424	3-683-775-01	s	SPRING, EXTENSION
425	3-683-776-01	s	GEAR, PLATEN
426	3-683-777-01	s	GEAR PULLEY B, PLATEN
427	3-683-778-01	s	IDLER, BELT
428	3-683-779-02	s	SPRING, EXTENSION(TENSIONER)
429	3-683-795-01	s	COVER, BC SENSOR
430	3-683-796-01	s	ROLLER, FEED
431	3-683-797-02	o	GUIDE L, CARTRIDGE
432	3-683-798-01	s	ROLLER, FF
433	3-683-799-02	s	FLAP, FEED
434	3-683-845-02	s	SPRING, FF
435	3-683-846-01	s	SHAFT, F FLAP
436	3-683-880-01	o	GUIDE, TRAY, PAPER SUPPLY
437	3-683-881-01	s	ARM, TRAY EJECT
438	3-683-882-02	s	ARM, PAPER SENSOR
439	3-683-883-01	s	SPRING, PAPER SENSOR
440	3-683-884-01	s	SPRING, EXTENSION, TRAY EJECT
441	4-926-218-01	s	RING (DIA.2), RETAINING



5-6. MECHANISM SECTION (4)



No.	Part No.	SP	Description
501	A-8278-109-C	s	P LIMITER GEAR ASSY
502	A-8310-504-A	o	MOUNTED CIRCUIT BOARD, SE-45
503	X-3678-221-1	s	SEPARATION ROLLER BRACKET ASSY
504	X-3678-224-2	o	ROLLER CHASSIS B ASSY
505	X-3678-225-1	o	PAPER ARM STAY ASSY
506	X-3678-258-1	s	PAPER GEAR A ASSY
507	1-541-309-11	s	MOTOR, L(RF-370C)
508	1-655-231-11	o	PRINTED CIRCUIT BOARD, SE-46
509	1-655-233-11	o	PRINTED CIRCUIT BOARD, SE-48
510	1-655-234-11	o	PRINTED CIRCUIT BOARD, SU-16
511	4-926-218-01	s	RING (DIA.2), RETAINING
512	3-683-375-03	o	CHASSIS MAIN, MECHANICAL
513	3-683-390-01	s	ROLLER, PICK UP
514	3-683-391-02	s	ROLLER, PAPER SUPPLY
515	3-683-392-02	s	ROLLER, PAPER EJECT
516	3-683-393-02	s	BEARING F, ROLLER
517	3-683-394-01	s	BEARING B, ROLLER
518	3-683-395-02	s	ARM, PAPER RETAINING
519	3-683-396-02	s	GEAR, PICK UP
520	3-683-397-02	s	GEAR, PAPER SUPPLY
521	3-683-398-02	s	GEAR, IDLER, SEPARATION
522	3-683-673-02	s	GEAR B, PAPER
523	3-683-674-01	s	GEAR C, PAPER
524	3-683-675-02	s	GUIDE U, PAPER EJCT
525	3-683-676-01	s	FLAP, PAPER LEAD
526	3-683-677-02	s	LINK, FLAP REMOVE
527	3-683-678-01	s	LINK, FLAP LEAD
528	3-683-679-03	s	FLAP, PAPER REMOVE
529	3-683-680-01	s	BELT, 70 TN
530	3-683-681-01	s	GUIDE, TRAY, PAPER EJECT
531	3-683-682-01	o	CHASSIS R, ROLLER
532	3-683-683-01	s	PLATE, SUPPLY SENSOR
533	3-683-684-02	s	GUIDE, PAPER SUPPLY
534	3-683-685-01	s	SHAFT P, FLAP
535	3-683-686-01	s	SPRING, TORSION (FLAP)
536	3-683-687-01	s	SPRING, EXTENSION, PR 1
537	3-683-689-01	s	SPRING, EXTENSION, PS ROLLER
538	3-683-690-01	s	SPRING, EXTENSION, P LIFT
539	3-683-694-03	s	ROLLER, PAPER SEPARETION
540	3-683-695-02	s	GUIDE, SEPARATION ROLLER
541	3-683-764-01	s	LEVER, PAPER SUPPLY
542	3-683-765-01	o	HOLDER, PAPER LEVER
543	3-683-768-02	s	GUIDE T, PAPER EJECT
544	3-683-769-02	s	FLAP, PAPER EJECT
545	3-683-770-01	s	ROLLER, SUPPORT, PAPER EJECT
546	3-683-771-01	o	RETAINER, GUIDE, PAPER EJECT
547	3-683-772-01	s	SPRING, ROLLER HOLD
548	3-683-773-02	s	GEAR, PAPER MOTOR
549	3-703-360-09	o	PIN, PARALLEL
550	3-687-170-01	s	SPRING, EARTH, ROLLER

SECTION 6
ELECTRICAL PARTS LIST

NOTE:
- Items marked "O" in the SP column are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise stated.

When indicating part by reference number, please include the board name.

RESISTORS
- All resistors are in ohms.
- F:non-flammable

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

FMY-17 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-486-A	o	MOUNTED CIRCUIT BOARD, FMY-17
			<CAPACITOR>
C1	1-126-399-11	s	ELECT, CHIP 10uF 20% 35V
C2	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C3	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C4	1-164-156-11	s	CERAMIC 0.1uF 25V
C5	1-164-156-11	s	CERAMIC 0.1uF 25V
C6	1-164-156-11	s	CERAMIC 0.1uF 25V
C7	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C8	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C9	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C10	1-164-156-11	s	CERAMIC 0.1uF 25V
C11	1-164-156-11	s	CERAMIC 0.1uF 25V
C12	1-164-156-11	s	CERAMIC 0.1uF 25V
C13	1-164-156-11	s	CERAMIC 0.1uF 25V
C15	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C18	1-164-156-11	s	CERAMIC 0.1uF 25V
C19	1-164-156-11	s	CERAMIC 0.1uF 25V
C21	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C22	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C23	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C24	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C25	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C26	1-164-156-11	s	CERAMIC 0.1uF 25V
C27	1-164-156-11	s	CERAMIC 0.1uF 25V
C28	1-164-156-11	s	CERAMIC 0.1uF 25V
C29	1-162-974-11	s	CERAMIC 0.01uF 50V
C30	1-164-156-11	s	CERAMIC 0.1uF 25V
C31	1-164-156-11	s	CERAMIC 0.1uF 25V
C32	1-164-156-11	s	CERAMIC 0.1uF 25V
C34	1-164-156-11	s	CERAMIC 0.1uF 25V
C35	1-164-156-11	s	CERAMIC 0.1uF 25V
C36	1-164-156-11	s	CERAMIC 0.1uF 25V
C37	1-164-156-11	s	CERAMIC 0.1uF 25V
C38	1-164-156-11	s	CERAMIC 0.1uF 25V
C39	1-164-156-11	s	CERAMIC 0.1uF 25V
C40	1-162-915-11	s	CERAMIC, CHIP 10PF 5PF 50V
C41	1-162-915-11	s	CERAMIC, CHIP 10PF 5PF 50V
C42	1-162-915-11	s	CERAMIC, CHIP 10PF 5PF 50V
C43	1-164-156-11	s	CERAMIC 0.1uF 25V
C44	1-162-974-11	s	CERAMIC 0.01uF 50V
C45	1-162-974-11	s	CERAMIC 0.01uF 50V

(FMY-17 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C46	1-162-974-11	s	CERAMIC 0.01uF 50V
C47	1-162-974-11	s	CERAMIC 0.01uF 50V
C48	1-162-974-11	s	CERAMIC 0.01uF 50V
C49	1-162-974-11	s	CERAMIC 0.01uF 50V
C50	1-164-156-11	s	CERAMIC 0.1uF 25V
C51	1-164-156-11	s	CERAMIC 0.1uF 25V
C52	1-164-156-11	s	CERAMIC 0.1uF 25V
C53	1-164-156-11	s	CERAMIC 0.1uF 25V
C54	1-164-156-11	s	CERAMIC 0.1uF 25V
C55	1-164-156-11	s	CERAMIC 0.1uF 25V
C56	1-164-156-11	s	CERAMIC 0.1uF 25V
C57	1-164-156-11	s	CERAMIC 0.1uF 25V
C58	1-164-156-11	s	CERAMIC 0.1uF 25V
C59	1-164-156-11	s	CERAMIC 0.1uF 25V
C60	1-164-156-11	s	CERAMIC 0.1uF 25V
C61	1-164-156-11	s	CERAMIC 0.1uF 25V
C62	1-164-156-11	s	CERAMIC 0.1uF 25V
C63	1-164-156-11	s	CERAMIC 0.1uF 25V
C101	1-164-156-11	s	CERAMIC 0.1uF 25V
C102	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C103	1-164-156-11	s	CERAMIC 0.1uF 25V
C104	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C105	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C106	1-164-156-11	s	CERAMIC 0.1uF 25V
C107	1-164-156-11	s	CERAMIC 0.1uF 25V
C108	1-164-156-11	s	CERAMIC 0.1uF 25V
C109	1-164-156-11	s	CERAMIC 0.1uF 25V
C110	1-162-974-11	s	CERAMIC 0.01uF 50V
C111	1-162-974-11	s	CERAMIC 0.01uF 50V
C112	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C113	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C114	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C115	1-164-156-11	s	CERAMIC 0.1uF 25V
C116	1-164-156-11	s	CERAMIC 0.1uF 25V
C117	1-164-156-11	s	CERAMIC 0.1uF 25V
C118	1-164-156-11	s	CERAMIC 0.1uF 25V
C119	1-164-156-11	s	CERAMIC 0.1uF 25V
C120	1-164-156-11	s	CERAMIC 0.1uF 25V
C121	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C122	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C123	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C124	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C125	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V

(FMY-17 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C126	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C201	1-104-608-11	s	ELECT 33uF 20% 6.3V
C202	1-104-608-11	s	ELECT 33uF 20% 6.3V
C203	1-164-156-11	s	CERAMIC 0.1uF 25V
C204	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C205	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C206	1-162-964-11	s	CERAMIC 0.001uF 10% 50V
C207	1-164-156-11	s	CERAMIC 0.1uF 25V
C208	1-104-608-11	s	ELECT 33uF 20% 6.3V
C209	1-164-156-11	s	CERAMIC 0.1uF 25V
C210	1-164-156-11	s	CERAMIC 0.1uF 25V
C211	1-104-608-11	s	ELECT 33uF 20% 6.3V
C212	1-164-156-11	s	CERAMIC 0.1uF 25V
C213	1-164-156-11	s	CERAMIC 0.1uF 25V
C214	1-164-156-11	s	CERAMIC 0.1uF 25V
C215	1-164-156-11	s	CERAMIC 0.1uF 25V
C216	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C217	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C218	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C219	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C220	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C221	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C222	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C223	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C224	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C225	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C226	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C227	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C228	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C229	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C230	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C231	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C232	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C233	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C234	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C235	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C236	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C237	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C238	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C239	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C301	1-164-156-11	s	CERAMIC 0.1uF 25V
C302	1-164-156-11	s	CERAMIC 0.1uF 25V
C303	1-164-156-11	s	CERAMIC 0.1uF 25V
C304	1-164-156-11	s	CERAMIC 0.1uF 25V
C305	1-164-156-11	s	CERAMIC 0.1uF 25V
C306	1-104-608-11	s	ELECT 33uF 20% 6.3V
C307	1-164-156-11	s	CERAMIC 0.1uF 25V
C308	1-164-156-11	s	CERAMIC 0.1uF 25V
C309	1-164-156-11	s	CERAMIC 0.1uF 25V
C310	1-162-964-11	s	CERAMIC 0.001uF 10% 50V
C311	1-164-156-11	s	CERAMIC 0.1uF 25V
C312	1-164-156-11	s	CERAMIC 0.1uF 25V
C313	1-164-156-11	s	CERAMIC 0.1uF 25V
C314	1-164-156-11	s	CERAMIC 0.1uF 25V
C315	1-164-156-11	s	CERAMIC 0.1uF 25V
C316	1-104-608-11	s	ELECT 33uF 20% 6.3V
C317	1-164-156-11	s	CERAMIC 0.1uF 25V
C401	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C402	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C403	1-162-964-11	s	CERAMIC 0.001uF 10% 50V

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Ref. No. or Q'ty	Part No.	SP	Description
C404	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C405	1-164-156-11	s	CERAMIC 0.1uF 25V
C406	1-164-156-11	s	CERAMIC 0.1uF 25V
C407	1-164-156-11	s	CERAMIC 0.1uF 25V
C408	1-164-156-11	s	CERAMIC 0.1uF 25V
C409	1-104-608-11	s	ELECT 33uF 20% 6.3V
C410	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C411	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C412	1-162-964-11	s	CERAMIC 0.001uF 10% 50V
C413	1-164-156-11	s	CERAMIC 0.1uF 25V
C414	1-164-156-11	s	CERAMIC 0.1uF 25V
C415	1-164-156-11	s	CERAMIC 0.1uF 25V
C416	1-162-964-11	s	CERAMIC 0.001uF 10% 50V
C417	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C418	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C419	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C420	1-164-156-11	s	CERAMIC 0.1uF 25V
C421	1-164-156-11	s	CERAMIC 0.1uF 25V
C422	1-164-156-11	s	CERAMIC 0.1uF 25V
C423	1-104-608-11	s	ELECT 33uF 20% 6.3V
C424	1-164-156-11	s	CERAMIC 0.1uF 25V
C425	1-164-156-11	s	CERAMIC 0.1uF 25V
C426	1-164-156-11	s	CERAMIC 0.1uF 25V
C427	1-164-156-11	s	CERAMIC 0.1uF 25V
C428	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C429	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C430	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C431	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C432	1-164-156-11	s	CERAMIC 0.1uF 25V
C433	1-164-156-11	s	CERAMIC 0.1uF 25V
C434	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C435	1-104-608-11	s	ELECT 33uF 20% 6.3V
C436	1-104-608-11	s	ELECT 33uF 20% 6.3V
C437	1-104-608-11	s	ELECT 33uF 20% 6.3V
C438	1-164-156-11	s	CERAMIC 0.1uF 25V
C439	1-164-156-11	s	CERAMIC 0.1uF 25V
C440	1-164-156-11	s	CERAMIC 0.1uF 25V
C501	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C502	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C503	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C504	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C505	1-162-927-11	s	CERAMIC, CHIP 100PF 5% 50V
C507	1-104-608-11	s	ELECT 33uF 20% 6.3V
C508	1-164-156-11	s	CERAMIC 0.1uF 25V
C509	1-164-156-11	s	CERAMIC 0.1uF 25V
C510	1-164-156-11	s	CERAMIC 0.1uF 25V
C511	1-104-608-11	s	ELECT 33uF 20% 6.3V
C513	1-164-156-11	s	CERAMIC 0.1uF 25V
C514	1-164-156-11	s	CERAMIC 0.1uF 25V
C515	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C516	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C518	1-104-608-11	s	ELECT 33uF 20% 6.3V
C519	1-164-156-11	s	CERAMIC 0.1uF 25V
C520	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C521	1-162-919-11	s	CERAMIC, CHIP 22PF 5% 50V
C522	1-164-156-11	s	CERAMIC 0.1uF 25V
C523	1-104-608-11	s	ELECT 33uF 20% 6.3V
C524	1-164-156-11	s	CERAMIC 0.1uF 25V
C525	1-104-608-11	s	ELECT 33uF 20% 6.3V
C526	1-162-964-11	s	CERAMIC 0.001uF 10% 50V

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Ref. No. or Q'ty	Part No.	SP	Description
C528	1-164-156-11	s	CERAMIC 0.1uF 25V
C529	1-164-156-11	s	CERAMIC 0.1uF 25V
C530	1-164-156-11	s	CERAMIC 0.1uF 25V
C531	1-164-156-11	s	CERAMIC 0.1uF 25V
C532	1-164-156-11	s	CERAMIC 0.1uF 25V
C533	1-164-156-11	s	CERAMIC 0.1uF 25V
C534	1-164-156-11	s	CERAMIC 0.1uF 25V
C535	1-164-156-11	s	CERAMIC 0.1uF 25V
C536	1-164-156-11	s	CERAMIC 0.1uF 25V
C537	1-164-156-11	s	CERAMIC 0.1uF 25V
C538	1-164-156-11	s	CERAMIC 0.1uF 25V
C539	1-164-156-11	s	CERAMIC 0.1uF 25V
C540	1-164-156-11	s	CERAMIC 0.1uF 25V
C541	1-164-156-11	s	CERAMIC 0.1uF 25V
C542	1-164-156-11	s	CERAMIC 0.1uF 25V
C543	1-164-156-11	s	CERAMIC 0.1uF 25V
C544	1-164-156-11	s	CERAMIC 0.1uF 25V
C545	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C546	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C547	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C548	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C549	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C550	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C551	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C552	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C553	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C554	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C555	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C556	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C557	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C558	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C559	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C560	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C561	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C562	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C563	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C564	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C565	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C566	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C567	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C568	1-162-921-11	s	CERAMIC, CHIP 33PF 5% 50V
C569	1-104-608-11	s	ELECT 33uF 20% 6.3V
C570	1-104-608-11	s	ELECT 33uF 20% 6.3V
C601	1-164-156-11	s	CERAMIC 0.1uF 25V
C602	1-164-156-11	s	CERAMIC 0.1uF 25V
C603	1-164-156-11	s	CERAMIC 0.1uF 25V
C604	1-164-156-11	s	CERAMIC 0.1uF 25V
C605	1-104-608-11	s	ELECT 33uF 20% 6.3V
C606	1-164-156-11	s	CERAMIC 0.1uF 25V
C607	1-164-156-11	s	CERAMIC 0.1uF 25V
C608	1-164-156-11	s	CERAMIC 0.1uF 25V
C609	1-164-156-11	s	CERAMIC 0.1uF 25V
C610	1-104-608-11	s	ELECT 33uF 20% 6.3V
C611	1-164-156-11	s	CERAMIC 0.1uF 25V
C612	1-164-156-11	s	CERAMIC 0.1uF 25V
C613	1-164-156-11	s	CERAMIC 0.1uF 25V
C614	1-164-156-11	s	CERAMIC 0.1uF 25V
C615	1-104-608-11	s	ELECT 33uF 20% 6.3V

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Ref. No. or Q'ty	Part No.	SP	Description
			<CONNECTOR>
CN251	1-568-165-11	s	CONNECTOR, FPC 22P
CN252	1-568-165-11	s	CONNECTOR, FPC 22P
CN261	1-764-829-11	o	CONNECTOR, FPC 24P
CN262	1-764-829-11	o	CONNECTOR, FPC 24P
CN301	1-770-303-21	o	CONNECTOR, FPC 25P
CN601	1-565-771-11	s	CONNECTOR, FPC (1.0MM) (ZIF) 12P
CN602	1-565-728-11	s	CONNECTOR, FPC 17P
CN701	1-580-106-21	s	CONNECTOR, FPC 28P
CN702	1-770-302-21	o	CONNECTOR, FPC 9P
CN951	1-568-237-11	s	CONNECTOR, FPC (1.0MM) (ZIF) 14P
CNI406	1-526-659-00	o	SOCKET, IC 28P
			<DIODE>
D1	8-719-800-76	s	DIODE 1SS226
D2	8-719-800-76	s	DIODE 1SS226
D3	8-719-800-76	s	DIODE 1SS226
D4	8-719-800-76	s	DIODE 1SS226
			<FILTER>
FL201	1-236-738-11	s	FILTER, EMI
FL202	1-236-738-11	s	FILTER, EMI
FL203	1-236-738-11	s	FILTER, EMI
FL204	1-236-738-11	s	FILTER, EMI
FL205	1-236-738-11	s	FILTER, EMI
FL206	1-236-738-11	s	FILTER, EMI
FL207	1-236-738-11	s	FILTER, EMI
FL208	1-236-738-11	s	FILTER, EMI
FL209	1-236-738-11	s	FILTER, EMI
FL210	1-236-738-11	s	FILTER, EMI
FL211	1-236-738-11	s	FILTER, EMI
FL212	1-236-738-11	s	FILTER, EMI
FL213	1-236-738-11	s	FILTER, EMI
FL214	1-236-738-11	s	FILTER, EMI
FL215	1-236-738-11	s	FILTER, EMI
FL216	1-236-738-11	s	FILTER, EMI
FL217	1-236-738-11	s	FILTER, EMI
FL218	1-236-738-11	s	FILTER, EMI
FL219	1-236-738-11	s	FILTER, EMI
FL220	1-236-738-11	s	FILTER, EMI
FL221	1-236-738-11	s	FILTER, EMI
FL222	1-236-738-11	s	FILTER, EMI
FL223	1-236-738-11	s	FILTER, EMI
FL224	1-236-738-11	s	FILTER, EMI
FL401	1-236-738-11	s	FILTER, EMI
FL402	1-236-738-11	s	FILTER, EMI
FL403	1-236-738-11	s	FILTER, EMI
FL404	1-236-738-11	s	FILTER, EMI
FL405	1-236-738-11	s	FILTER, EMI
FL406	1-236-738-11	s	FILTER, EMI
FL407	1-236-738-11	s	FILTER, EMI
FL408	1-236-738-11	s	FILTER, EMI
FL409	1-236-738-11	s	FILTER, EMI
FL410	1-236-738-11	s	FILTER, EMI
FL411	1-236-738-11	s	FILTER, EMI
FL412	1-236-738-11	s	FILTER, EMI
FL413	1-236-738-11	s	FILTER, EMI
FL414	1-236-738-11	s	FILTER, EMI

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Ref. No. or Q'ty	Part No.	SP	Description
FL415	1-236-738-11	s	FILTER, EMI
FL416	1-236-738-11	s	FILTER, EMI
FL417	1-236-738-11	s	FILTER, EMI
FL418	1-236-738-11	s	FILTER, EMI
FL419	1-236-738-11	s	FILTER, EMI
FL420	1-236-738-11	s	FILTER, EMI
FL421	1-236-738-11	s	FILTER, EMI
FL422	1-236-738-11	s	FILTER, EMI
FL423	1-236-738-11	s	FILTER, EMI
FL424	1-236-738-11	s	FILTER, EMI
FL425	1-236-738-11	s	FILTER, EMI
FL426	1-236-738-11	s	FILTER, EMI
FL427	1-236-738-11	s	FILTER, EMI
FL428	1-236-738-11	s	FILTER, EMI
FL501	1-236-738-11	s	FILTER, EMI
FL502	1-236-738-11	s	FILTER, EMI
FL503	1-236-738-11	s	FILTER, EMI
FL504	1-236-738-11	s	FILTER, EMI
FL505	1-236-738-11	s	FILTER, EMI
FL506	1-236-738-11	s	FILTER, EMI
FL507	1-236-738-11	s	FILTER, EMI
			<IC>
IC1	8-759-175-30	s	IC NJM78L12UA-TE1
IC2	8-759-157-17	s	IC PQ05SZ1U
IC3	8-759-157-17	s	IC PQ05SZ1U
IC5	8-752-337-04	s	IC CXD1176Q
IC6	8-752-337-04	s	IC CXD1176Q
IC7	8-752-337-04	s	IC CXD1176Q
IC8	8-759-296-57	s	IC LM1201MX
IC9	8-759-296-57	s	IC LM1201MX
IC10	8-759-296-57	s	IC LM1201MX
IC101	8-752-338-46	s	IC CXD1178Q
IC201	8-759-508-87	s	IC CXD8911Q
IC202	8-759-330-70	s	IC HM5117400AS7GSEL
IC203	8-759-330-70	s	IC HM5117400AS7GSEL
IC204	8-759-330-70	s	IC HM5117400AS7GSEL
IC205	8-759-193-17	s	IC CXD8868Q
IC301	8-759-330-69	s	IC MC74F257AMEL
IC302	8-759-330-69	s	IC MC74F257AMEL
IC303	8-759-193-17	s	IC CXD8868Q
IC304	8-759-193-17	s	IC CXD8868Q
IC305	8-759-194-80	s	IC CXD8869Q
IC306	8-759-193-17	s	IC CXD8868Q
IC307	8-759-925-74	s	IC SN74HC04ANS
IC401	8-759-330-71	s	IC MX23C8000-MM00
IC402	8-759-330-72	s	IC MX23C2000-MS00
IC403	8-759-926-82	s	IC SN74HC574ANS
IC404	8-759-194-80	s	IC CXD8869Q
IC405	8-759-323-88	s	IC HD6435328RA00F
IC406	8-759-330-24	o	IC MX27C512-FMY17V1.0
IC407	8-759-926-11	s	IC SN74HC138ANS
IC408	8-759-270-26	s	IC SN74HC253ANS-E05
IC409	8-759-926-49	s	IC SN74HC245ANS
IC410	8-759-926-49	s	IC SN74HC245ANS
IC411	8-759-925-85	s	IC SN74HC32ANS
IC412	8-759-925-85	s	IC SN74HC32ANS
IC413	8-759-925-76	s	IC SN74HC08NS
IC501	8-759-284-13	s	IC CXD8931Q

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Ref. No. or Q'ty	Part No.	SP	Description
IC504	8-759-297-59	s	IC DS1000Z-50(TE2)
IC507	8-759-297-59	s	IC DS1000Z-50(TE2)
IC508	8-759-270-28	s	IC SN74HC257ANS-E05
IC509	8-759-926-49	s	IC SN74HC245ANS
IC510	8-759-926-49	s	IC SN74HC245ANS
IC511	8-759-926-49	s	IC SN74HC245ANS
IC512	8-759-926-49	s	IC SN74HC245ANS
IC513	8-759-925-74	s	IC SN74HC04ANS
IC514	8-759-925-74	s	IC SN74HC04ANS
IC515	8-759-925-74	s	IC SN74HC04ANS
IC516	8-759-033-02	s	IC MC74F04M
IC517	8-759-925-72	s	IC SN74HC02ANS
IC518	8-759-925-72	s	IC SN74HC02ANS
IC519	8-759-033-16	s	IC MC74F74M
IC520	8-759-033-16	s	IC MC74F74M
IC521	8-759-033-16	s	IC MC74F74M
IC522	8-759-033-16	s	IC MC74F74M
IC523	8-759-297-61	s	IC DS1000Z-75(TE2)
IC524	8-759-297-59	s	IC DS1000Z-50(TE2)
IC525	8-759-297-61	s	IC DS1000Z-75(TE2)
IC526	8-759-297-59	s	IC DS1000Z-50(TE2)
IC527	8-759-287-50	s	IC CXD8932Q
IC528	8-759-287-50	s	IC CXD8932Q
IC601	8-752-351-97	s	IC CXK1206ATM
IC602	8-752-351-97	s	IC CXK1206ATM
IC603	8-752-351-97	s	IC CXK1206ATM
IC604	8-752-351-97	s	IC CXK1206ATM
IC605	8-752-351-97	s	IC CXK1206ATM
IC606	8-752-351-97	s	IC CXK1206ATM
IC607	8-752-351-97	s	IC CXK1206ATM
IC608	8-752-351-97	s	IC CXK1206ATM
IC609	8-752-351-97	s	IC CXK1206ATM
IC610	8-752-351-97	s	IC CXK1206ATM
IC611	8-752-351-97	s	IC CXK1206ATM
IC612	8-752-351-97	s	IC CXK1206ATM
			<COIL>
L1	1-424-653-11	s	COIL, CHOKE 10uH
L2	1-424-653-11	s	COIL, CHOKE 10uH
L3	1-424-653-11	s	COIL, CHOKE 10uH
L4	1-408-777-00	s	INDUCTOR CHIP 10uH
L5	1-408-777-00	s	INDUCTOR CHIP 10uH
L6	1-408-777-00	s	INDUCTOR CHIP 10uH
L101	1-408-777-00	s	INDUCTOR CHIP 10uH
L102	1-408-777-00	s	INDUCTOR CHIP 10uH
L103	1-408-777-00	s	INDUCTOR CHIP 10uH
L401	1-424-653-11	s	COIL, CHOKE 10uH
			<TRANSISTOR>
Q6	8-729-140-47	s	TRANSISTOR 2SC3735-L-B35
Q7	8-729-140-47	s	TRANSISTOR 2SC3735-L-B35
Q8	8-729-140-47	s	TRANSISTOR 2SC3735-L-B35
Q101	8-729-901-00	s	TRANSISTOR DTC124EK
Q102	8-729-402-84	s	TRANSISTOR XN4601
Q103	8-729-402-84	s	TRANSISTOR XN4601
Q104	8-729-402-84	s	TRANSISTOR XN4601
Q105	8-729-402-84	s	TRANSISTOR XN4601
Q106	8-729-402-84	s	TRANSISTOR XN4601
Q107	8-729-402-84	s	TRANSISTOR XN4601

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Ref. No. or Q'ty	Part No.	SP	Description
			<RESISTOR>
R1	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R2	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R3	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R4	1-216-811-11	s	METAL, CHIP 150 5% 1/16W
R5	1-216-811-11	s	METAL, CHIP 150 5% 1/16W
R6	1-216-811-11	s	METAL, CHIP 150 5% 1/16W
R7	1-216-811-11	s	METAL, CHIP 150 5% 1/16W
R8	1-216-811-11	s	METAL, CHIP 150 5% 1/16W
R9	1-216-811-11	s	METAL, CHIP 150 5% 1/16W
R10	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R11	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R12	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R13	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R14	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R15	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R16	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R17	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R18	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R19	1-218-668-11	s	METAL 100 0.50% 1/16W
R20	1-218-668-11	s	METAL 100 0.50% 1/16W
R21	1-218-668-11	s	METAL 100 0.50% 1/16W
R26	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R27	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R28	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R29	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R30	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R31	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R35	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R36	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R37	1-216-821-11	s	METAL, CHIP 1K 5% 1/16W
R38	1-218-285-11	s	METAL, CHIP 75 5% 1/16W
R39	1-218-285-11	s	METAL, CHIP 75 5% 1/16W
R40	1-218-285-11	s	METAL, CHIP 75 5% 1/16W
R41	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R42	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R43	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R44	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R45	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R46	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R47	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R48	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R49	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R101	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R102	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R103	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R104	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R105	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R106	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R107	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R108	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R109	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R110	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R111	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R112	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R113	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R114	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R115	1-216-803-11	s	METAL, CHIP 33 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R116	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R117	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R118	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R119	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R120	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R121	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R122	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R123	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R124	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R125	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R126	1-216-827-11	s	METAL, CHIP 3.3K 5% 1/16W
R127	1-216-820-11	s	METAL, CHIP 820 5% 1/16W
R128	1-216-814-11	s	METAL, CHIP 270 5% 1/16W
R129	1-216-817-11	s	METAL, CHIP 470 5% 1/16W
R130	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R131	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R132	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R133	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R134	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R135	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R136	1-216-837-11	s	METAL, CHIP 22K 5% 1/16W
R137	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R138	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R139	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R140	1-216-794-11	s	METAL 5.6 5% 1/16W
R141	1-216-794-11	s	METAL 5.6 5% 1/16W
R142	1-216-794-11	s	METAL 5.6 5% 1/16W
R143	1-216-794-11	s	METAL 5.6 5% 1/16W
R144	1-216-794-11	s	METAL 5.6 5% 1/16W
R145	1-216-794-11	s	METAL 5.6 5% 1/16W
R146	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R147	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R148	1-216-825-11	s	METAL, CHIP 2.2K 5% 1/16W
R149	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R150	1-216-810-11	s	METAL, CHIP 120 5% 1/16W
R151	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R152	1-216-810-11	s	METAL, CHIP 120 5% 1/16W
R153	1-216-812-11	s	METAL, CHIP 180 5% 1/16W
R154	1-216-810-11	s	METAL, CHIP 120 5% 1/16W
R182	1-216-801-11	s	METAL, CHIP 22 5% 1/16W
R183	1-216-801-11	s	METAL, CHIP 22 5% 1/16W
R184	1-216-801-11	s	METAL, CHIP 22 5% 1/16W
R201	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R202	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R203	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R204	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R205	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R206	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R207	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R208	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R209	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R210	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R211	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R212	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R213	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R214	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R215	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R216	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R217	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R218	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

(FMY-17 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R219	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R220	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R221	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R222	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R223	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R224	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R225	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R226	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R227	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R228	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R229	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R230	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R231	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R232	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R233	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R234	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R235	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R236	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R237	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R238	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R239	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R240	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R241	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R242	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R243	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R244	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R245	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R246	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R247	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R248	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R249	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R250	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R251	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R252	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R253	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R254	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R255	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R256	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R257	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R258	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R259	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R260	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R261	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R262	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R263	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R264	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R265	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R266	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R267	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R268	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R269	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R270	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R271	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R272	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R273	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R274	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R275	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R276	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R277	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R278	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R279	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R280	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R281	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R282	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R283	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R284	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R285	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R286	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R287	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R288	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R289	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R290	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R291	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R292	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R293	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R294	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R295	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R296	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R297	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R298	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R299	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R301	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R302	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R303	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R304	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R305	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R306	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R307	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R308	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R309	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R310	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R311	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R312	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R313	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R314	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R315	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R316	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R317	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R318	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R319	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R320	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R321	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R322	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R323	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R324	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R325	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R326	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R327	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R328	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R329	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R330	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R331	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R332	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R333	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R334	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R335	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R336	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R337	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R338	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R339	1-216-803-11	s	METAL, CHIP 33 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R340	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R341	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R342	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R343	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R344	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R345	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R346	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R347	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R348	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R349	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R350	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R351	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R352	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R353	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R354	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R355	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R356	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R357	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R358	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R359	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R360	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R361	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R362	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R363	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R364	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R365	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R366	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R367	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R368	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R369	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R370	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R371	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R372	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R373	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R374	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R375	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R376	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R377	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R378	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R379	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R380	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R381	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R382	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R383	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R384	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R385	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R386	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R387	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R388	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R389	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R390	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R391	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R392	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R393	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R394	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R395	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R396	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R397	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R398	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R399	1-216-803-11	s	METAL, CHIP 33 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R401	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R402	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R403	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R404	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R405	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R406	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R407	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R408	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R409	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R410	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R411	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R412	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R413	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R414	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R415	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R416	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R417	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R418	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R419	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R420	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R421	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R422	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R423	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R424	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R425	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R426	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R427	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R428	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R429	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R430	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R431	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R432	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R433	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R434	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R435	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R436	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R437	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R438	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R439	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R440	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R441	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R442	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R443	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R444	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R445	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R446	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R447	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R448	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R449	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R450	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R451	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R452	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R453	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R454	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R455	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R456	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R457	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R458	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R459	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R501	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R502	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R503	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R504	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R505	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R506	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R507	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R508	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R509	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R510	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R511	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R512	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R513	1-216-819-11	s	METAL, CHIP 680 5% 1/16W
R514	1-216-819-11	s	METAL, CHIP 680 5% 1/16W
R515	1-216-829-11	s	METAL, CHIP 4.7K 5% 1/16W
R526	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R527	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R528	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R529	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R530	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R531	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R532	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R533	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R534	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R535	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R536	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R537	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R538	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R539	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R540	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R541	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R553	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R557	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R558	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R561	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R564	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R565	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R567	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R571	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R572	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R575	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R577	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R578	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R581	1-216-809-11	s	METAL, CHIP 100 5% 1/16W
R584	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R586	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R589	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R590	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R593	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R594	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R595	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R596	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R597	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R598	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R599	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R601	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R602	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R603	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R604	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R605	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R606	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R607	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R608	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R609	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R610	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R611	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R612	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R613	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R614	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R615	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R616	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R617	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R618	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R619	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R620	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R621	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R622	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R623	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R624	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R625	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R626	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R627	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R628	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R629	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R630	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R631	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R632	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R633	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R634	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R635	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R636	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R637	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R638	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R639	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R640	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R641	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R642	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R643	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R644	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R645	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R646	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R647	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R648	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R649	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R650	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R651	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R652	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R653	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R654	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R655	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R656	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R657	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R658	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R659	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R660	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R661	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R662	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R663	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R664	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R665	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R666	1-216-803-11	s	METAL, CHIP 33 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R667	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R668	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R669	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R670	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R671	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R672	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R673	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R674	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R675	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R676	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R677	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R678	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R679	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R680	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R681	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R682	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R683	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R684	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R685	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R686	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R687	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R688	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R689	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R690	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R691	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R692	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R693	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R694	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R695	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R696	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R697	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R698	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R699	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R700	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R701	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R702	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R703	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R704	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R705	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R706	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R707	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R708	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R709	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R710	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R711	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R712	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R713	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R714	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R715	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R716	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R717	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R718	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R719	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R720	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R721	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R722	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R723	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R724	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R725	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R726	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R727	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R728	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R729	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R730	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R731	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R732	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R733	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R734	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R735	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R736	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R737	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R738	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R739	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R740	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R741	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R742	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R743	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R744	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R745	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R746	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R747	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R748	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R749	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R750	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R751	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R752	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R753	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R754	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R755	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R756	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R757	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R758	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R759	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R760	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R761	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R762	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R763	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R764	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R765	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R766	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R767	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R768	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R769	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R770	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R771	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R772	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R773	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R774	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R775	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R776	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R777	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R778	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R779	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R780	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R781	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R782	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R783	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R784	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R785	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R786	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

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Ref. No. or Q'ty	Part No.	SP	Description
R787	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R788	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R789	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R790	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R791	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R792	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R793	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R794	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R795	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R796	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R797	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R798	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R799	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R800	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R801	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R802	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R803	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R804	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R805	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R806	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R807	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R808	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R809	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R810	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R811	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R812	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R813	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R814	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R815	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R816	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R817	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R818	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R819	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R820	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R821	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R822	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R823	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R824	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R851	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R852	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R853	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R854	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R855	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R856	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R857	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R858	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R859	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R860	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R861	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R862	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R863	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R864	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R865	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R866	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R867	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R868	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R869	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R870	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R871	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R872	1-216-803-11	s	METAL, CHIP 33 5% 1/16W

(FMY-17 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R873	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R874	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R875	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R876	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R877	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R878	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R879	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R880	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R881	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R882	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R883	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R884	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R885	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R886	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R887	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R888	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R889	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R890	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R891	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R892	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R893	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R894	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R895	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R896	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R897	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R901	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R902	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R903	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R904	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R905	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R906	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R907	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R908	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R909	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R910	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R911	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R912	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R913	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R914	1-216-803-11	s	METAL, CHIP 33 5% 1/16W
R915	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R916	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R917	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R918	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R919	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R920	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R921	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R922	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R923	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R924	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R925	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R926	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R927	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R928	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R929	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R930	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R931	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R932	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R933	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R934	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R935	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W

(FMY-17 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R936	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R937	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R938	1-216-833-11	s	METAL, CHIP 10K 5% 1/16W
R951	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R952	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R961	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R965	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R967	1-216-857-11	s	METAL, CHIP 1M 5% 1/16W
R968	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R971	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R974	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R981	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R985	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R988	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R990	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R991	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
			<CRYSTAL>
X201	1-760-613-21	s	VIBRATOR, CRYSTAL 24.0MHz
X401	1-579-996-21	s	VIBRATOR, CERAMIC 20.0MHz
X501	1-760-614-21	s	VIBRATOR, CRYSTAL 17.897725MHz
X502	1-579-995-12	s	VIBRATOR, CERAMIC 17.734475MHz

FMY-19 BOARD (UP-5600MDP ONLY)

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-602-A	o	MOUNTED CIRCUIT BOARD, FMY-19
1pc	1-769-483-11	s	CORD, CONNECTION (24CORE)
1pc	1-769-484-11	s	CORD, CONNECTION (24CORE)
			<CAPACITOR>
C201	1-104-608-11	s	ELECT 33uF 20% 6.3V
C202	1-104-608-11	s	ELECT 33uF 20% 6.3V
C203	1-164-156-11	s	CERAMIC 0.1uF 25V
C204	1-164-156-11	s	CERAMIC 0.1uF 25V
C205	1-164-156-11	s	CERAMIC 0.1uF 25V
C206	1-104-608-11	s	ELECT 33uF 20% 6.3V
C207	1-164-156-11	s	CERAMIC 0.1uF 25V
C208	1-164-156-11	s	CERAMIC 0.1uF 25V
C209	1-164-156-11	s	CERAMIC 0.1uF 25V
			<CONNECTOR>
CN203	1-764-829-11	o	CONNECTOR, FPC 24P
CN204	1-764-829-11	o	CONNECTOR, FPC 24P
			<IC>
IC201	8-759-199-26	s	IC HM514400BS7GS-EL
IC202	8-759-199-26	s	IC HM514400BS7GS-EL
IC203	8-759-199-26	s	IC HM514400BS7GS-EL
IC204	8-759-199-26	s	IC HM514400BS7GS-EL
IC205	8-759-199-26	s	IC HM514400BS7GS-EL
IC206	8-759-199-26	s	IC HM514400BS7GS-EL

(FMY-19 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
			<RESISTOR>
R201	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R202	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R203	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R204	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R205	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R206	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R207	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R208	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R209	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R210	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R211	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R212	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R213	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R214	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R215	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R216	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R217	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R218	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R219	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R220	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R221	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R222	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R223	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R224	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R225	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R226	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R227	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R228	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R229	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R230	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R231	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R232	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R233	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R234	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R235	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R236	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R237	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R238	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R239	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R240	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R241	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R242	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R243	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R244	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R245	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R246	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R247	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R248	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R249	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R250	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R251	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R252	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R253	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R254	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R255	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R256	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

(FMY-19 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R257	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R258	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R259	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R260	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R261	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R262	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R263	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R264	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R265	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R266	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R267	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R268	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R269	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R270	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R271	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R272	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R273	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R274	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R275	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R276	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R277	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R278	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R279	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R280	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R281	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R282	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R283	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R284	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R285	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R286	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R287	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R288	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R289	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R290	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R291	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R292	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R293	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R294	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R295	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R296	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R297	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R298	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R299	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R301	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R302	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R303	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R304	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R305	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R306	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R307	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R308	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R309	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R310	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R311	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

IF-31 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-480-A	o	MOUNTED CIRCUIT BOARD, IF-31
			<CONNECTOR>
CN301	1-568-942-11	o	CONNECTOR 4P MALE
CN601	1-770-301-11	o	CONNECTOR, FPC (DIP TYPE ZIF) 18P
CN602	1-770-301-11	o	CONNECTOR, FPC (DIP TYPE ZIF) 18P
J101	1-770-081-11	s	CONNECTOR, BNC (RECEPTACLE)
J105	1-573-590-12	s	CONNECTOR, (S) TERMINAL 4P
J106	1-770-080-11	s	CONNECTOR, ASSY (BNC) 1P
J201	1-770-081-11	s	CONNECTOR, BNC (RECEPTACLE)
J205	1-573-590-12	s	CONNECTOR, (S) TERMINAL 4P
J206	1-770-080-11	s	CONNECTOR, ASSY (BNC) 1P
			<DIODE>
D101	8-719-106-43	s	DIODE RD9.1M-B1
D102	8-719-106-43	s	DIODE RD9.1M-B1
D103	8-719-106-43	s	DIODE RD9.1M-B1
D104	8-719-106-43	s	DIODE RD9.1M-B1
D105	8-719-106-43	s	DIODE RD9.1M-B1
D106	8-719-106-43	s	DIODE RD9.1M-B1
D107	8-719-106-43	s	DIODE RD9.1M-B1
D108	8-719-106-43	s	DIODE RD9.1M-B1
D109	8-719-106-43	s	DIODE RD9.1M-B1
D110	8-719-106-43	s	DIODE RD9.1M-B1
D111	8-719-106-43	s	DIODE RD9.1M-B1
D112	8-719-106-43	s	DIODE RD9.1M-B1
D113	8-719-106-43	s	DIODE RD9.1M-B1
D114	8-719-106-43	s	DIODE RD9.1M-B1
D115	8-719-106-43	s	DIODE RD9.1M-B1
D116	8-719-106-43	s	DIODE RD9.1M-B1
D117	8-719-106-43	s	DIODE RD9.1M-B1
D118	8-719-106-43	s	DIODE RD9.1M-B1
D119	8-719-106-43	s	DIODE RD9.1M-B1
D120	8-719-106-43	s	DIODE RD9.1M-B1
D121	8-719-106-43	s	DIODE RD9.1M-B1
D122	8-719-106-43	s	DIODE RD9.1M-B1
D123	8-719-106-43	s	DIODE RD9.1M-B1
D124	8-719-106-43	s	DIODE RD9.1M-B1
D125	8-719-106-43	s	DIODE RD9.1M-B1
D126	8-719-106-43	s	DIODE RD9.1M-B1
D127	8-719-106-43	s	DIODE RD9.1M-B1
D128	8-719-106-43	s	DIODE RD9.1M-B1
D301	8-719-801-78	s	DIODE 1SS184
			<FILTER>
FL101	1-236-738-11	s	FILTER, EMI
FL102	1-236-738-11	s	FILTER, EMI
FL103	1-236-738-11	s	FILTER, EMI
FL104	1-236-738-11	s	FILTER, EMI
FL105	1-236-738-11	s	FILTER, EMI
FL106	1-236-738-11	s	FILTER, EMI
FL107	1-236-738-11	s	FILTER, EMI
FL201	1-236-738-11	s	FILTER, EMI
FL202	1-236-738-11	s	FILTER, EMI
FL203	1-236-738-11	s	FILTER, EMI
FL204	1-236-738-11	s	FILTER, EMI
FL205	1-236-738-11	s	FILTER, EMI
FL206	1-236-738-11	s	FILTER, EMI
FL207	1-236-738-11	s	FILTER, EMI

(IF-31 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
			<TRANSISTOR>
Q201	8-729-901-01	s	TRANSISTOR DTC144EK
Q202	8-729-140-75	s	TRANSISTOR 2SD999-CLCK
			<RESISTOR>
R101	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R102	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R103	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R104	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R105	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R106	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R107	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R108	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R109	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R110	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R111	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R112	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R113	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R114	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R201	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R202	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
			<RELAY>
RL101	1-515-622-11	s	RELAY
RL102	1-515-622-11	s	RELAY
RL103	1-515-622-11	s	RELAY
RL104	1-515-622-11	s	RELAY
RL105	1-515-622-11	s	RELAY
RL106	1-515-622-11	s	RELAY
RL107	1-515-622-11	s	RELAY
			<SWITCH>
S101	1-572-084-11	s	SWITCH, SLIDE
S102	1-572-084-11	s	SWITCH, SLIDE
S201	1-572-084-11	s	SWITCH, SLIDE

IF-35 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-482-A	o	MOUNTED CIRCUIT BOARD, IF-35
			<CAPACITOR>
C1	1-104-664-11	s	ELECT 47uF 20% 25V
C2	1-161-772-11	s	CERAMIC 0.1MF 10% 25V
C3	1-161-772-11	s	CERAMIC 0.1MF 10% 25V
C4	1-128-551-11	s	ELECT 22uF 20% 63V
			<CONNECTOR>
CN1	1-568-939-11	o	CONNECTOR 12P MALE
CN101	1-506-469-11	o	CONNECTOR, 4P, MALE
CN601	1-564-712-11	o	CONNECTOR (SMALL TYPE) 10P MALE
CN901	1-695-452-11	o	CONNECTOR, BOARD TO BOARD 50P
CN991	1-563-161-11	s	CONNECTOR, D-SUB(MOUNT TYPE) 25P FEMALE
CN992	1-566-681-11	s	CONNECTOR, D-SUB 9P FEMALE
			<FILTER>
FL1	1-239-237-21	s	FILTER, LOW PASS
FL2	1-239-237-21	s	FILTER, LOW PASS
FL3	1-239-237-21	s	FILTER, LOW PASS
FL4	1-239-237-21	s	FILTER, LOW PASS
FL5	1-239-237-21	s	FILTER, LOW PASS
FL6	1-239-237-21	s	FILTER, LOW PASS
FL7	1-239-237-21	s	FILTER, LOW PASS
FL8	1-239-237-21	s	FILTER, LOW PASS
FL9	1-239-237-21	s	FILTER, LOW PASS
FL10	1-239-237-21	s	FILTER, LOW PASS
FL11	1-239-237-21	s	FILTER, LOW PASS
FL12	1-239-237-21	s	FILTER, LOW PASS
FL13	1-239-237-21	s	FILTER, LOW PASS
FL14	1-239-237-21	s	FILTER, LOW PASS
FL15	1-239-237-21	s	FILTER, LOW PASS
FL16	1-239-237-21	s	FILTER, LOW PASS
FL17	1-239-237-21	s	FILTER, LOW PASS
FL18	1-239-237-21	s	FILTER, LOW PASS
			<IC>
IC1	8-759-231-58	s	IC TA7812S
			<JACK>
J2	1-507-967-11	s	JACK

PRT-2 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-490-A	o	MOUNTED CIRCUIT BOARD, PRT-2
			<CAPACITOR>
C1	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C2	1-128-403-11	s	ELECT 47uF 20% 35V
C3	1-128-403-11	s	ELECT 47uF 20% 35V
C4	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C5	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C6	1-128-397-21	s	ELECT 100uF 20% 16V
C7	1-128-397-21	s	ELECT 100uF 20% 16V
C8	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C9	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C10	1-128-393-11	s	ELECT 100uF 20% 10V
C11	1-128-393-11	s	ELECT 100uF 20% 10V
C12	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C13	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C14	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C15	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C16	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C17	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C18	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C19	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C20	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C21	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C22	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C23	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C24	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C25	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C26	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C27	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C28	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C29	1-128-403-11	s	ELECT 47uF 20% 35V
C30	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C31	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C32	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C33	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C34	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C35	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C36	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C37	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C38	1-128-397-21	s	ELECT 100uF 20% 16V
C39	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C40	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C41	1-128-397-21	s	ELECT 100uF 20% 16V
C42	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C43	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C44	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C45	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C46	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C47	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C48	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C49	1-164-161-11	s	CERAMIC, CHIP 0.0022uF 10% 100V
C50	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C51	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C52	1-164-161-11	s	CERAMIC, CHIP 0.0022uF 10% 100V
C53	1-128-393-11	s	ELECT 100uF 20% 10V
C54	1-128-393-11	s	ELECT 100uF 20% 10V
C55	1-128-393-11	s	ELECT 100uF 20% 10V
C56	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

(PRT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C57	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C58	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C59	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C60	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C61	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C62	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C63	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C64	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C65	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C66	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C67	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C68	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C69	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C70	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C71	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C72	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C73	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C74	1-128-403-11	s	ELECT 47uF 20% 35V
C201	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C202	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C203	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C204	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C205	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C206	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C207	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C208	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C209	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C210	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C211	1-128-393-11	s	ELECT 100uF 20% 10V
C212	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C213	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C214	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C215	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C216	1-128-393-11	s	ELECT 100uF 20% 10V
C217	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C218	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C219	1-128-235-11	s	ELECT 0.47uF 20% 50V
C220	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C221	1-128-393-11	s	ELECT 100uF 20% 10V
C222	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C223	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C224	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C225	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
			<CONNECTOR>
CN1	1-506-478-11	o	CONNECTOR, 13P, MALE
CN201	1-562-990-11	o	CONNECTOR, FPC 14P, FEMALE
CN401	1-770-296-21	o	HOUSING, 9P
CN801	1-563-461-11	o	CONNECTOR 28P FEMALE
CN951	1-568-084-11	s	CONNECTOR (RECEPTALE) 30P
CN952	1-568-084-11	s	CONNECTOR (RECEPTALE) 30P
CN1111	1-691-550-11	s	CONNECTOR (1.5MM)(SMD) 3P MALE
CN1112	1-573-806-21	s	CONNECTOR (1.5MM)(SMD) 6P MALE
CN1113	1-695-320-21	o	CONNECTOR (1.5MM)(SMD) 2P MALE
CN1114	1-695-320-51	o	CONNECTOR (1.5MM)(SMD) 2P MALE
CNI7	1-526-659-00	o	SOCKET, IC 28P

(PRT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
			<DIODE>
D1	8-719-200-02	s	DIODE 10E2
D2	8-719-200-02	s	DIODE 10E2
D201	8-719-800-76	s	DIODE 1SS226
D202	8-719-800-76	s	DIODE 1SS226
D203	8-719-800-76	s	DIODE 1SS226
D204	8-719-800-76	s	DIODE 1SS226
D205	8-719-800-76	s	DIODE 1SS226
D206	8-719-800-76	s	DIODE 1SS226
D207	8-719-800-76	s	DIODE 1SS226
D208	8-719-800-76	s	DIODE 1SS226
D209	8-719-800-76	s	DIODE 1SS226
D210	8-719-800-76	s	DIODE 1SS226
D211	8-719-800-76	s	DIODE 1SS226
D212	8-719-800-76	s	DIODE 1SS226
D213	8-719-800-76	s	DIODE 1SS226
D214	8-719-800-76	s	DIODE 1SS226
D215	8-719-800-76	s	DIODE 1SS226
D216	8-719-800-76	s	DIODE 1SS226
D217	8-719-800-76	s	DIODE 1SS226
D218	8-719-800-76	s	DIODE 1SS226
D219	8-719-800-76	s	DIODE 1SS226
D220	8-719-800-76	s	DIODE 1SS226
D221	8-719-800-76	s	DIODE 1SS226
D222	8-719-800-76	s	DIODE 1SS226
D223	8-719-016-74	s	DIODE 1SS352
			<FILTER>
FL1	1-236-740-21	s	FILTER, EMI
FL2	1-236-740-21	s	FILTER, EMI
FL3	1-236-740-21	s	FILTER, EMI
FL4	1-236-740-21	s	FILTER, EMI
FL5	1-236-740-21	s	FILTER, EMI
FL6	1-236-740-21	s	FILTER, EMI
FL7	1-236-740-21	s	FILTER, EMI
FL8	1-236-740-21	s	FILTER, EMI
FL9	1-236-740-21	s	FILTER, EMI
FL10	1-236-740-21	s	FILTER, EMI
FL11	1-236-740-21	s	FILTER, EMI
FL12	1-236-740-21	s	FILTER, EMI
FL13	1-236-740-21	s	FILTER, EMI
FL14	1-236-740-21	s	FILTER, EMI
FL15	1-236-740-21	s	FILTER, EMI
FL16	1-236-740-21	s	FILTER, EMI
FL17	1-236-740-21	s	FILTER, EMI
FL18	1-236-740-21	s	FILTER, EMI
FL19	1-236-740-21	s	FILTER, EMI
FL20	1-236-740-21	s	FILTER, EMI
FL21	1-236-740-21	s	FILTER, EMI
FL22	1-236-740-21	s	FILTER, EMI
FL23	1-236-740-21	s	FILTER, EMI
FL24	1-236-740-21	s	FILTER, EMI
FL201	1-236-740-21	s	FILTER, EMI
FL202	1-236-740-21	s	FILTER, EMI
FL203	1-236-740-21	s	FILTER, EMI
FL204	1-236-740-21	s	FILTER, EMI
FL205	1-236-740-21	s	FILTER, EMI
FL206	1-236-740-21	s	FILTER, EMI
FL207	1-236-740-21	s	FILTER, EMI

(PRT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
FL208	1-236-740-21	s	FILTER, EMI
FL209	1-236-740-21	s	FILTER, EMI
FL210	1-236-740-21	s	FILTER, EMI
FL211	1-236-740-21	s	FILTER, EMI
FL212	1-236-740-21	s	FILTER, EMI
FL213	1-236-740-21	s	FILTER, EMI
FL214	1-236-740-21	s	FILTER, EMI
FL215	1-236-740-21	s	FILTER, EMI
FL216	1-236-740-21	s	FILTER, EMI
FL217	1-236-740-21	s	FILTER, EMI
FL218	1-236-740-21	s	FILTER, EMI
FL219	1-236-740-21	s	FILTER, EMI
FL220	1-236-740-21	s	FILTER, EMI
FL221	1-236-740-21	s	FILTER, EMI
FL222	1-236-740-21	s	FILTER, EMI
FL223	1-236-740-21	s	FILTER, EMI
FL224	1-236-740-21	s	FILTER, EMI
FL225	1-236-740-21	s	FILTER, EMI
FL226	1-236-740-21	s	FILTER, EMI
FL227	1-236-740-21	s	FILTER, EMI
FL228	1-236-740-21	s	FILTER, EMI
FL229	1-236-740-21	s	FILTER, EMI
FL230	1-236-740-21	s	FILTER, EMI
FL231	1-236-740-21	s	FILTER, EMI
FL232	1-236-740-21	s	FILTER, EMI
			<IC>
IC1	8-759-926-49	s	IC SN74HC245ANS
IC2	8-759-925-76	s	IC SN74HC08NS
IC3	8-759-926-11	s	IC SN74HC138ANS
IC4	8-759-925-80	s	IC SN74HC14NS
IC5	8-759-100-95	s	IC UPC324G2
IC6	8-759-926-49	s	IC SN74HC245ANS
IC7	8-759-330-22	o	IC MX27C512-PRT2V1.0
IC8	8-759-178-20	s	IC M62354FP
IC9	8-759-926-49	s	IC SN74HC245ANS
IC10	8-759-925-74	s	IC SN74HC04ANS
IC11	8-759-157-19	s	IC MB3863PF-G-BND
IC12	8-759-100-95	s	IC UPC324G2
IC13	8-759-254-94	s	IC HD6413378F10
IC14	8-759-148-14	s	IC UPD71055GB-3B4
IC15	8-759-925-90	s	IC SN74HC74ANS
IC16	8-759-926-21	s	IC SN74HC161ANS
IC17	8-759-168-39	s	IC ST24C01M1-013TR
IC18	8-759-322-54	s	IC SLA7024M
IC201	8-759-925-76	s	IC SN74HC08NS
IC202	8-759-925-85	s	IC SN74HC32ANS
IC203	8-759-926-49	s	IC SN74HC245ANS
IC204	8-759-926-82	s	IC SN74HC574ANS
IC205	8-759-926-49	s	IC SN74HC245ANS
IC206	8-759-330-21	o	IC M27C2001-PRT2GM1.0
IC207	8-759-267-11	s	IC CXD8909Q
IC208	8-759-183-30	s	IC CXD8862Q
IC209	8-759-925-72	s	IC SN74HC02ANS
IC210	8-759-189-55	s	IC CXD8865R
IC211	8-759-183-30	s	IC CXD8862Q
			<COIL>
L1	1-424-653-11	s	COIL, CHOKE 10uH
L2	1-424-653-11	s	COIL, CHOKE 10uH

(PRT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
L3	1-424-653-11	s	COIL, CHOKE 10uH
L201	1-424-653-11	s	COIL, CHOKE 10uH
L202	1-424-653-11	s	COIL, CHOKE 10uH
			<TRANSISTOR>
Q1	8-729-017-80	s	TRANSISTOR 2SD992-Z
Q2	8-729-101-07	s	TRANSISTOR 2SB798
Q3	8-729-901-00	s	TRANSISTOR DTC124EK
Q4	8-729-114-84	s	TRANSISTOR 2SB962Z-T2E
Q5	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q6	8-729-017-80	s	TRANSISTOR 2SD992-Z
Q7	8-729-114-84	s	TRANSISTOR 2SB962Z-T2E
Q8	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q9	8-729-017-80	s	TRANSISTOR 2SD992-Z
Q10	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q11	8-729-114-84	s	TRANSISTOR 2SB962Z-T2E
			<RESISTOR>
R1	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R2	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R3	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R4	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R5	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R6	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R7	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R8	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R9	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R10	1-216-077-00	s	METAL, CHIP 15K 5% 1/10W
R11	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R12	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R13	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R14	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R15	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R16	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R17	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R18	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R19	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R20	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R21	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R22	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R23	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R24	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R25	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R26	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R27	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R28	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R29	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R30	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R31	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R32	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R33	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R34	1-216-037-00	s	METAL, CHIP 330 5% 1/10W
R35	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R36	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R37	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R38	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R39	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R40	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R41	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W

(PRT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R42	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R43	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R44	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R45	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R46	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R47	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R48	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R49	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R50	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R51	1-216-309-00	s	METAL 5.6 5% 1/10W
R52	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R53	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R54	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R55	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R56	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R57	1-216-309-00	s	METAL 5.6 5% 1/10W
R58	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R59	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R60	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R61	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R62	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R63	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R64	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R65	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R66	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R67	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R68	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R69	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R70	1-216-089-00	s	METAL, CHIP 47K 5% 1/10W
R71	1-216-089-00	s	METAL, CHIP 47K 5% 1/10W
R72	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R73	1-216-037-00	s	METAL, CHIP 330 5% 1/10W
R74	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R75	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R76	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R77	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R78	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R79	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R80	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R81	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R82	1-216-373-11	s	METAL 2.2 5% 2W
R83	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R84	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R85	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R86	1-216-023-00	s	METAL, CHIP 82 5% 1/10W
R87	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R88	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R89	1-216-373-11	s	METAL 2.2 5% 2W
R90	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R91	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R92	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R93	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R94	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R95	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R96	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R97	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R98	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R99	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R100	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R101	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W

(PRT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R102	1-216-375-00	s	METAL 3.3 5% 2W
R103	1-216-375-00	s	METAL 3.3 5% 2W
R201	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R202	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R203	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R204	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R205	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R206	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R207	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R208	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R209	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R210	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R211	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R212	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R213	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R214	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R215	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R216	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R217	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R218	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R219	1-216-121-00	s	METAL, CHIP 1M 5% 1/10W
R220	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R221	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R222	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R223	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R224	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R225	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R226	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R227	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R228	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R229	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R230	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R231	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R232	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R233	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R234	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R235	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R236	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R237	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R238	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R239	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R240	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R241	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R242	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R243	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R244	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R245	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R246	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R247	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R248	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R249	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R250	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R251	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R252	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R253	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R254	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R255	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R256	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R257	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R258	1-216-025-00	s	METAL, CHIP 100 5% 1/10W

(PRT-2 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R259	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R260	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R262	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R263	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R264	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R265	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R266	1-216-009-00	s	METAL, CHIP 22 5% 1/10W
R267	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R269	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R270	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R271	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R272	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R273	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
			<SWITCH>
S1	1-570-909-11	s	SWITCH, TACTIL (REFLOW TYPE)
S2	1-572-577-11	s	SWITCH, SLIDE
S3	1-572-577-11	s	SWITCH, SLIDE
			<THERMISTOR>
TH1	1-810-075-11	s	THERMISTOR, NTC
			<CRYSTAL>
X1	1-579-996-21	s	VIBRATOR, CERAMIC 20.0MHz
X201	1-579-996-21	s	VIBRATOR, CERAMIC 20.0MHz
X202	1-760-590-21	s	OSCILLATOR, CRYSTAL 26.513MHz

SE-26 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
W1	1-954-321-11	o	HARNESS, SUB (GOLD FINISH)
1pc	1-655-248-11	o	PRINTED CIRCUIT BOARD, SE-26

SE-44 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-492-A	o	MOUNTED CIRCUIT BOARD, SE-44
1pc	3-685-091-01	s	HOLDER, PAPER SENSOR
			<CAPACITOR>
C1	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C2	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C3	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C4	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C5	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
			<CONNECTOR>
CN201	1-568-237-11	s	CONNECTOR, FPC (1.0MM)(ZIF) 14P
CN301	1-573-056-21	o	CONNECTOR, FPC (1.0MM)(ZIF) 13P

(SE-44 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
CN501	1-568-098-11	o	CONNECTOR (PLUG) 30P
CN502	1-568-098-11	o	CONNECTOR (PLUG) 30P
CN1103	1-573-806-21	s	CONNECTOR (1.5MM) (SMD) 6P MALE
CN1104	1-695-320-31	o	CONNECTOR (1.5MM) (SMD) 2P MALE
CN1105	1-770-469-21	o	CONNECTOR (PC BOARD) 2P
CN1106	1-770-470-21	o	CONNECTOR (PC BOARD) 6P
CN1107	1-573-768-21	s	CONNECTOR (1.5MM) (SMD) 5P MALE
CN1108	1-691-550-11	s	CONNECTOR (1.5MM) (SMD) 3P MALE
			<DIODE & PHOTOINTERRUPTER>
D1	8-719-938-07	s	DIODE GL480
D2	8-719-938-07	s	DIODE GL480
D3	8-719-049-47	s	DIODE GL514A
PH1	8-719-939-05	s	PHOTOINTERRUPTER GP-1S54
PH2	8-719-939-05	s	PHOTOINTERRUPTER GP-1S54
PH3	8-749-923-97	s	PHOTOINTERRUPTER GP2S40
			<IC>
IC2	8-759-100-95	s	IC UPC324G2
			<TRANSISTOR>
Q1	8-729-101-07	s	TRANSISTOR 2SB798
Q2	8-729-901-00	s	TRANSISTOR DTC124EK
Q3	8-729-930-95	s	PHOTO TRANSISTOR PT480F
Q4	8-729-930-95	s	PHOTO TRANSISTOR PT480F
Q5	8-719-988-59	s	PHOTO TRANSISTOR PT501A
Q6	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q7	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q8	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
			<RESISTOR>
R1	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R2	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R3	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R4	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R5	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R6	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R7	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R8	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R9	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R10	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R11	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R12	1-216-017-00	s	METAL, CHIP 47 5% 1/10W
R13	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R14	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R15	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R16	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R17	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R18	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R19	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R20	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W

SE-45 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-504-A	o	MOUNTED CIRCUIT BOARD, SE-45
1pc	3-685-090-01	o	HOLDER, SENSOR
			<DIODE>
D1	8-719-938-07	s	DIODE GL480
			<TRANSISTOR>
Q1	8-729-930-95	s	PHOTO TRANSISTOR PT480F
			<HARNESS>
W2001	1-954-322-11	o	HARNESS, SUB (SE-45)
W2002	1-954-323-11	o	HARNESS, SUB (SE-46)

SE-46 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-655-231-11	o	PRINTED CIRCUIT BOARD, SE-46
			<CONNECTOR>
CN2003	1-566-758-11	o	PIN, CONNECTOR (PC BOARD) 3P
			<PHOTOINTERRUPTER>
PH1	8-749-010-50	s	PHOTOINTERUPTER RPI-5100

SE-47 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-655-232-11	o	PRINTED CIRCUIT BOARD, SE-47
			<CONNECTOR>
CN2005	1-565-877-11	s	PIN, CONNECTOR (PC BOARD) 5P
			<PHOTOINTERRUPTER>
PH2	8-749-923-97	s	PHOTO INTERRUPTER GP2S40

SE-48 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-655-233-11	o	PRINTED CIRCUIT BOARD, SE-48
			<PHOTOINTERRUPTER>
PH3	8-719-939-05	s	PHOTOINTERRUPTER GP-1S54
			<HARNESS>
W2006	1-954-325-11	o	HARNESS, SUB (SE-48)

SE-53 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-655-237-11	o	PRINTED CIRCUIT BOARD, SE-53
			<PHOTOINTERRUPTER>
PH4	8-749-010-50	s	PHOTO INTERUPTER RPI-5100
			<HARNESS>
W2007	1-954-326-11	o	HARNESS, SUB (SE-53)

SE-54 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-655-238-11	o	PRINTED CIRCUIT BOARD, SE-54
			<CONNECTOR>
CN2008	1-565-875-11	o	CONNECTOR (PC BOARD) 3P MALE
			<DIODE>
PH5	8-719-975-18	s	DIODE GP1S51

SU-16 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-655-234-11	o	PRINTED CIRCUIT BOARD, SU-16
1pc	3-683-773-02	s	GEAR, PAPER MOTOR
			<MOTOR>
M1	1-541-309-11	s	MOTOR, L (RF-370C)
			<HARNESS>
W2010	1-954-328-11	o	HARNESS, SUB (PAPERFEED MOTOR)

SU-17 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-500-A	s	MOUNTED CIRCUIT BOARD, SU-17
1pc	3-737-886-01	s	TABEL, WORM
			<HARNESS>
W2011	1-954-329-11	o	HARNESS, SUB (RIBBON MOTOR)

SU-18 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-501-A	s	MOUNTED CIRCUIT BOARD, SU-18
1pc	3-686-299-01	s	PULLEY, SYSTEM MOTOR
			<HARNESS>
S2012	1-954-330-12	o	HARNESS, SUB (HEAD MOTOR)

SY-11 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-488-A	o	MOUNTED CIRCUIT BOARD, SY-11
			<CAPACITOR>
C101	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C102	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C131	1-163-099-00	s	CERAMIC, CHIP 18PF 5% 50V
C191	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C192	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C201	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C202	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C203	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C204	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C205	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C301	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C401	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C402	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C801	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C802	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C803	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C804	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C805	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C806	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C807	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C808	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C809	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C810	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C811	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C812	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C813	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C814	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V

(SY-11 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C815	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C816	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C817	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C818	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C819	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C820	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C821	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C822	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C823	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C841	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C842	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C843	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C844	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C845	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C846	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C847	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C848	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C849	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C850	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C851	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C871	1-126-393-11	s	ELECT 33uF 20% 10V
C872	1-126-393-11	s	ELECT 33uF 20% 10V
C873	1-126-393-11	s	ELECT 33uF 20% 10V
C874	1-126-393-11	s	ELECT 33uF 20% 10V
C875	1-126-393-11	s	ELECT 33uF 20% 10V
C951	1-128-401-11	s	ELECT 100uF 20% 25V
C952	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C953	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C954	1-128-401-11	s	ELECT 100uF 20% 25V
			<CONNECTOR>
CN1	1-569-512-11	o	CONNECTOR, FPC 18P
CN201	1-770-303-21	o	CONNECTOR, FPC 25P
CN401	1-565-771-11	s	CONNECTOR, FPC (1.0MM)(ZIF) 12P
CN402	1-569-478-21	s	CONNECTOR, FPC 20P
CN601	1-764-007-11	s	CONNECTOR (SMD) 12P MALE
CN602	1-695-223-21	s	CONNECTOR (SMD) 10P MALE
CN701	1-565-771-11	s	CONNECTOR, FPC (1.0MM)(ZIF) 12P
CN801	1-565-892-11	s	CONNECTOR 18P FEMALE
CN901	1-691-845-11	o	CONNECTOR (SQUARE TYPE) 50P
CN951	1-573-056-21	o	CONNECTOR, FPC (1.0MM)(ZIF) 13P
			<TRIMMER>
CV301	1-141-424-11	s	CAP, TRIMMER
			<DIODE>
D180	8-719-801-78	s	DIODE 1SS184
D181	8-719-801-78	s	DIODE 1SS184
D182	8-719-801-78	s	DIODE 1SS184
D183	8-719-801-78	s	DIODE 1SS184
D191	8-719-801-78	s	DIODE 1SS184
D401	8-719-800-76	s	DIODE 1SS226
D801	8-719-800-76	s	DIODE 1SS226
D802	8-719-800-76	s	DIODE 1SS226
D803	8-719-800-76	s	DIODE 1SS226
D804	8-719-800-76	s	DIODE 1SS226
D805	8-719-800-76	s	DIODE 1SS226
D806	8-719-800-76	s	DIODE 1SS226
D807	8-719-800-76	s	DIODE 1SS226

(SY-11 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
D808	8-719-800-76	s	DIODE 1SS226
D809	8-719-800-76	s	DIODE 1SS226
D810	8-719-800-76	s	DIODE 1SS226
D811	8-719-800-76	s	DIODE 1SS226
D812	8-719-800-76	s	DIODE 1SS226
			<FILTER>
FL801	1-236-738-11	s	FILTER, EMI
FL802	1-236-738-11	s	FILTER, EMI
FL803	1-236-738-11	s	FILTER, EMI
FL804	1-236-738-11	s	FILTER, EMI
FL805	1-236-738-11	s	FILTER, EMI
FL806	1-236-738-11	s	FILTER, EMI
FL807	1-236-738-11	s	FILTER, EMI
FL808	1-236-738-11	s	FILTER, EMI
FL809	1-236-738-11	s	FILTER, EMI
FL810	1-236-738-11	s	FILTER, EMI
FL811	1-236-738-11	s	FILTER, EMI
FL812	1-236-738-11	s	FILTER, EMI
FL813	1-236-738-11	s	FILTER, EMI
FL814	1-236-738-11	s	FILTER, EMI
FL815	1-236-738-11	s	FILTER, EMI
FL816	1-236-738-11	s	FILTER, EMI
FL817	1-236-738-11	s	FILTER, EMI
FL818	1-236-738-11	s	FILTER, EMI
FL819	1-236-738-11	s	FILTER, EMI
FL820	1-236-738-11	s	FILTER, EMI
FL821	1-236-738-11	s	FILTER, EMI
FL822	1-236-738-11	s	FILTER, EMI
FL823	1-236-738-11	s	FILTER, EMI
FL824	1-236-738-11	s	FILTER, EMI
FL825	1-236-738-11	s	FILTER, EMI
FL826	1-236-738-11	s	FILTER, EMI
FL827	1-236-738-11	s	FILTER, EMI
FL828	1-236-738-11	s	FILTER, EMI
			<IC>
IC101	8-759-330-28	o	IC HD6473042F12-SY11BOOT-V1.00
IC102	8-759-926-11	s	IC SN74HC138ANS
IC103	8-759-926-11	s	IC SN74HC138ANS
IC111	8-759-180-12	s	IC AM29F010-120JC
IC112	8-759-297-97	s	IC HN58C66SFP25TZ
IC113	8-759-926-49	s	IC SN74HC245ANS
IC114	8-759-926-49	s	IC SN74HC245ANS
IC115	8-759-926-49	s	IC SN74HC245ANS
IC131	8-759-983-69	s	IC LM358PS
IC191	8-759-518-38	s	IC PST572CMT
IC201	8-759-988-66	s	IC MB89371APF
IC202	8-759-297-98	s	IC MAX211CAI-TE2
IC301	8-759-278-93	s	IC UPD6461GS-701-GLG-E2
IC401	8-759-988-13	s	IC LM393PS
IC501	8-759-926-49	s	IC SN74HC245ANS
IC502	8-759-926-49	s	IC SN74HC245ANS
IC511	8-759-925-72	s	IC SN74HC02ANS
IC512	8-759-925-80	s	IC SN74HC14NS
IC513	8-759-925-82	s	IC SN74HC21NS
			<COIL>
L301	1-410-388-31	s	INDUCTOR, CHIP 39uH
L951	1-424-675-11	s	COIL, CHOKE 33uH

(SY-11 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
			<TRANSISTOR>
Q131	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q511	8-729-900-98	s	TRANSISTOR DTC143TK
Q521	8-729-900-98	s	TRANSISTOR DTC143TK
Q531	8-729-900-98	s	TRANSISTOR DTC143TK
			<RESISTOR>
R131	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R132	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R133	1-216-031-00	s	METAL, CHIP 180 5% 1/10W
R134	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R151	1-216-009-00	s	METAL, CHIP 22 5% 1/10W
R152	1-216-009-00	s	METAL, CHIP 22 5% 1/10W
R160	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R161	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R162	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R163	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R164	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R165	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R166	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R167	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R170	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R171	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R172	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R173	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R174	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R175	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R176	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R177	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R180	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R181	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R182	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R183	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R191	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R192	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R401	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R402	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R403	1-216-089-00	s	METAL, CHIP 47K 5% 1/10W
R404	1-216-109-00	s	METAL, CHIP 330K 5% 1/10W
R405	1-216-077-00	s	METAL, CHIP 15K 5% 1/10W
R406	1-216-085-00	s	METAL, CHIP 33K 5% 1/10W
R407	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R408	1-216-101-00	s	METAL, CHIP 150K 5% 1/10W
R511	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R521	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R531	1-216-061-00	s	METAL, CHIP 3.3K 5% 1/10W
R750	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R751	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R752	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R753	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R754	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R755	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R756	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R757	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R758	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R759	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R760	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R761	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W

(SY-11 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R762	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R763	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R764	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R765	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R801	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R802	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R803	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R804	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R805	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R806	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R807	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R808	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R809	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R810	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R811	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R812	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R813	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R814	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R815	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R816	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R817	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R818	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R819	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R820	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R821	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R822	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R823	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R851	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R852	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R853	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R854	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R855	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R856	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R857	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R858	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R859	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R860	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R861	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R862	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R866	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R867	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R868	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R869	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R870	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R871	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R872	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R873	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R971	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R972	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R973	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R991	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R992	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R993	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
			<CRYSTAL>
X101	1-760-592-21	s	VIBRATOR, CRYSTAL (SMD) 9.8304MHz

VA-7 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-484-A	o	MOUNTED CIRCUIT BOARD, VA-7
			<CAPACITOR>
C101	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C102	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C103	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C107	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C108	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C109	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C110	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C111	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C112	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C113	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C114	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C115	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C116	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C117	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C118	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C300	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C301	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C302	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C303	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C304	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C305	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C306	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C307	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C308	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C309	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C310	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C311	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C312	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C313	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C314	1-164-005-11	s	CERAMIC, CHIP 0.47uF 25V
C315	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C316	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C317	1-163-037-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C318	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C319	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C320	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C321	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C322	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C323	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C324	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C325	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C326	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C327	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C328	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C329	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C330	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C331	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C332	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C333	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C334	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C335	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C336	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C337	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C338	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C339	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C340	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

(VA-7 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C341	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C342	1-104-610-11	s	ELECT 47uF 20% 4V
C346	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C347	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C348	1-164-005-11	s	CERAMIC, CHIP 0.47uF 25V
C349	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C350	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C351	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C352	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C353	1-163-809-11	s	CERAMIC, CHIP 0.047uF 10% 25V
C354	1-126-395-11	s	ELECT, CHIP 22uF 20% 16V
C355	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C356	1-164-695-11	s	CERAMIC 0.0022uF 5% 50V
C357	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C358	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C359	1-164-005-11	s	CERAMIC, CHIP 0.47uF 25V
C360	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C361	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C362	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C363	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C364	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C365	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C366	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C367	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C368	1-126-402-11	s	ELECT, CHIP 2.2uF 20% 50V
C369	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C370	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C371	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C372	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C373	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C374	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C375	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C376	1-126-395-11	s	ELECT, CHIP 22uF 20% 16V
C377	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C378	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C379	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C380	1-128-391-11	s	ELECT 330uF 20% 6.3V
C381	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C382	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C383	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C384	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C385	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C386	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C387	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C388	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C389	1-128-391-11	s	ELECT 330uF 20% 6.3V
C390	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C391	1-126-396-11	s	ELECT, CHIP 47uF 20% 16V
C392	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C393	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C394	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C395	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C396	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C397	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C398	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C399	1-163-037-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C400	1-163-037-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C401	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C402	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C403	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C404	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C405	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C406	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C407	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C408	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C409	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C410	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C501	1-126-399-11	s	ELECT, CHIP 10uF 20% 35V
C502	1-128-394-11	s	ELECT 220uF 20% 10V
C503	1-128-394-11	s	ELECT 220uF 20% 10V
C504	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C505	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C506	1-128-391-11	s	ELECT 330uF 20% 6.3V
C507	1-128-391-11	s	ELECT 330uF 20% 6.3V
C508	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C509	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C510	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C511	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C512	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C513	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C514	1-126-395-11	s	ELECT, CHIP 22uF 20% 16V
C515	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C600	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C601	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C602	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C603	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C604	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C605	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C606	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C607	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C608	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C609	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C610	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C611	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C612	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C613	1-163-017-00	s	CERAMIC, CHIP 0.0047uF 5% 50V
C614	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C615	1-163-809-11	s	CERAMIC, CHIP 0.047uF 10% 25V
C616	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C617	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C618	1-163-091-00	s	CERAMIC, CHIP 8PF 50V
C619	1-163-091-00	s	CERAMIC, CHIP 8PF 50V
C620	1-164-489-11	s	CERAMIC 0.22uF 10% 16V
C621	1-163-809-11	s	CERAMIC, CHIP 0.047uF 10% 25V
C622	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C623	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C625	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C627	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C628	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C629	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C630	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C631	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C632	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C633	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C634	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C635	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C636	1-163-809-11	s	CERAMIC, CHIP 0.047uF 10% 25V
C637	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C638	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C639	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C640	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C641	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C642	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C643	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C644	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C645	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C646	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C647	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C648	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C652	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C654	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C655	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C656	1-164-004-11	s	CERAMIC, CHIP 0.1uF 10% 25V
C657	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C658	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C659	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C660	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C662	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C663	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C664	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C665	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C800	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C801	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C802	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C803	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C804	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C805	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C806	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C807	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C808	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C809	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C810	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C811	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C812	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C813	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C814	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C819	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C820	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C821	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C822	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C823	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C824	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C825	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C826	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C827	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C828	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C829	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C830	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C831	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C832	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C833	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C834	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C835	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C836	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C837	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C838	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C839	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C840	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C841	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C842	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V

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Ref. No. or Q'ty	Part No.	SP	Description
C843	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C844	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1000	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1001	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1002	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1003	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1004	1-163-037-11	s	CERAMIC, CHIP 0.022uF 10% 25V
C1005	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C1006	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C1007	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C1008	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1009	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1010	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C1011	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C1012	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C1013	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1014	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1015	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1016	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1017	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1018	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1019	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1020	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1021	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1022	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1023	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1024	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1025	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1026	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1027	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1028	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1029	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1030	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1031	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1032	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1033	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C1034	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C1035	1-126-401-11	s	ELECT, CHIP 1uF 20% 50V
C1036	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1037	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1038	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1039	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1040	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C1041	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1042	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1043	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1044	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1045	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1046	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1048	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C1049	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C1050	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C1051	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C1052	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C1053	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C1054	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1055	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C1056	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C1057	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1058	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C1059	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C1060	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1061	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1062	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C1065	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C1075	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C1076	1-126-194-21	s	ELECT 1.5uF 20% 50V
C1077	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1078	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1079	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1080	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1081	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1082	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 50V
C1083	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1084	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C1085	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1088	1-126-392-11	s	ELECT, CHIP 100uF 20% 6.3V
C1089	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1090	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C1091	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C1092	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C1093	1-163-097-00	s	CERAMIC, CHIP 15PF 5% 50V
C1094	1-163-097-00	s	CERAMIC, CHIP 15PF 5% 50V
C1095	1-163-097-00	s	CERAMIC, CHIP 15PF 5% 50V
C1096	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1097	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1098	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1099	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1100	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1101	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1102	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1103	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1104	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1105	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1106	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1107	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1108	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1109	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1110	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1111	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C1112	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1113	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1114	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C1115	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1116	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1117	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1118	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C1119	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1120	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1121	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1122	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1123	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C1126	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1127	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1128	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1129	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1130	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1131	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1132	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1133	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

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Ref. No. or Q'ty	Part No.	SP	Description
C1134	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1135	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1136	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1137	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1138	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1139	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1140	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1141	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1142	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1143	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1144	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1145	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1146	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1147	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1152	1-163-097-00	s	CERAMIC, CHIP 15PF 5% 50V
C1153	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
C1154	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1155	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1156	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1157	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1158	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1159	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1160	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1161	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1162	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1163	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1164	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1165	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1166	1-126-391-11	s	ELECT, CHIP 47uF 20% 6.3V
C1167	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1168	1-126-390-11	s	ELECT, CHIP 22uF 20% 6.3V
C1169	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C1170	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C1171	1-163-089-00	s	CERAMIC, CHIP 6PF 50V
			<CONNECTOR>
CN101	1-770-300-21	o	HOUSING, 18P
CN102	1-770-300-21	o	HOUSING, 18P
CN201	1-770-297-21	o	HOUSING, 12P
CN202	1-770-299-21	o	HOUSING, 17P
CN301	1-766-383-11	o	CONNECTOR (1.5MM)(SMD) 12P MALE
CN302	1-766-382-11	o	CONNECTOR (1.5MM)(SMD) 10P MALE
CN901	1-770-468-21	o	CONNECTOR (PC BOARD) 10P
			<TRIMMER>
CV301	1-141-424-11	s	CAP, TRIMMER
CV302	1-141-424-11	s	CAP, TRIMMER
CV601	1-141-423-61	s	CAP, TRIMMER
CV602	1-141-423-61	s	CAP, TRIMMER
CV1002	1-141-423-61	s	CAP, TRIMMER
CV1003	1-141-423-61	s	CAP, TRIMMER
CV1004	1-141-423-61	s	CAP, TRIMMER
			<DIODE>
D501	8-719-800-76	s	DIODE 1SS226
D601	8-719-800-76	s	DIODE 1SS226
D1001	8-713-102-22	s	DIODE 1T362A-M20E-T8A

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Ref. No. or Q'ty	Part No.	SP	Description
			<DELAY LINE>
DL301	1-415-306-00	s	DELAY LINE 340nS
DL302	1-415-122-31	s	DELAY LINE, 1H (PAL)
			<FILTER>
FL301	1-239-563-11	s	FILTER, LOW PASS
FL302	1-239-563-11	s	FILTER, LOW PASS
FL303	1-239-563-11	s	FILTER, LOW PASS
FL801	1-236-924-21	s	FILTER, LOW PASS
FL802	1-236-924-21	s	FILTER, LOW PASS
FL803	1-236-924-21	s	FILTER, LOW PASS
			<IC>
IC301	8-759-093-42	s	IC MC141625AFU
IC302	8-759-710-86	s	IC NJM2233BM
IC303	8-759-710-86	s	IC NJM2233BM
IC305	8-752-058-64	s	IC CXA1213BS
IC306	8-759-710-86	s	IC NJM2233BM
IC307	8-759-710-86	s	IC NJM2233BM
IC308	8-759-710-86	s	IC NJM2233BM
IC309	8-759-983-69	s	IC LM358PS
IC310	8-759-278-94	s	IC M62359FP
IC311	8-759-062-66	s	IC TC7S66F
IC312	8-759-062-66	s	IC TC7S66F
IC313	8-759-262-00	s	IC MC14576CF
IC400	8-759-983-69	s	IC LM358PS
IC401	8-759-242-64	s	IC TC4W53F
IC501	8-759-175-30	s	IC NJM78L12UA-TE1
IC502	8-759-157-17	s	IC PQ05SZ1U
IC503	8-759-157-17	s	IC PQ05SZ1U
IC504	8-759-168-19	s	IC TA78L09F-TE12L
IC505	8-759-168-19	s	IC TA78L09F-TE12L
IC600	8-759-242-64	s	IC TC4W53F
IC601	8-759-008-45	s	IC MC74HC4538F
IC602	8-759-710-86	s	IC NJM2233BM
IC603	8-752-062-80	s	IC CXA1686M
IC604	8-752-039-91	s	IC CXA1437Q
IC607	8-759-008-45	s	IC MC74HC4538F
IC608	8-759-008-45	s	IC MC74HC4538F
IC609	8-759-710-12	s	IC NJM2230M
IC610	8-759-242-64	s	IC TC4W53F
IC800	8-759-062-66	s	IC TC7S66F
IC801	8-759-062-66	s	IC TC7S66F
IC802	8-759-062-66	s	IC TC7S66F
IC1001	8-752-053-21	s	IC CXA1211M
IC1002	8-752-053-21	s	IC CXA1211M
IC1004	8-752-068-43	s	IC CXA1645M
IC1005	8-759-270-28	s	IC SN74HC257ANS-E05
IC1006	8-752-341-58	s	IC CXD1217Q
IC1007	8-759-242-64	s	IC TC4W53F
IC1010	8-759-242-76	s	IC TC7W08F
IC1011	8-759-011-65	s	IC MC74HC4053F
IC1012	8-759-242-64	s	IC TC4W53F
IC1013	8-759-278-95	s	IC BA7606F
IC1015	8-759-242-72	s	IC TC7W00F
IC1016	8-759-242-76	s	IC TC7W08F

(VA-7 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
			<COIL>
L300	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L301	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L303	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L304	1-410-380-31	s	INDUCTOR CHIP 8.2uH
L305	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L306	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L307	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L308	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L309	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L310	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L501	1-424-653-11	s	COIL, CHOKE 10uH
L502	1-424-653-11	s	COIL, CHOKE 10uH
L503	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L601	1-410-656-11	s	INDUCTOR CHIP 150UH
L602	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L603	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L807	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L1001	1-410-377-31	s	INDUCTOR CHIP 4.7uH
L1002	1-410-377-31	s	INDUCTOR CHIP 4.7uH
L1003	1-410-387-11	s	INDUCTOR CHIP 33UH
L1004	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L1006	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L1007	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L1008	1-408-771-11	s	INDUCTOR CHIP 3.3UH
L1009	1-408-771-11	s	INDUCTOR CHIP 3.3UH
LV301	1-411-191-21	s	COIL, VARIABLE (D.A.T)
			<TRANSISTOR>
Q101	8-729-402-81	s	TRANSISTOR XN4501
Q102	8-729-402-81	s	TRANSISTOR XN4501
Q103	8-729-402-81	s	TRANSISTOR XN4501
Q107	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q108	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q109	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q300	8-729-216-22	s	TRANSISTOR 2SA1162
Q301	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q302	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q303	8-729-420-36	s	TRANSISTOR XN2501
Q304	8-729-122-63	s	TRANSISTOR 2SA1226
Q305	8-729-420-36	s	TRANSISTOR XN2501
Q306	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q307	8-729-402-81	s	TRANSISTOR XN4501
Q308	8-729-901-00	s	TRANSISTOR DTC124EK
Q309	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q310	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q311	8-729-402-87	s	TRANSISTOR XN2401
Q312	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q313	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q314	8-729-402-13	s	TRANSISTOR XN1501
Q315	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q316	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q323	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q325	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q326	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q327	8-729-402-13	s	TRANSISTOR XN1501
Q400	8-729-901-00	s	TRANSISTOR DTC124EK
Q600	8-729-901-00	s	TRANSISTOR DTC124EK
Q601	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6

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Ref. No. or Q'ty	Part No.	SP	Description
Q602	8-729-420-36	s	TRANSISTOR XN2501
Q603	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q604	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q605	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q606	8-729-901-00	s	TRANSISTOR DTC124EK
Q609	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q611	8-729-901-00	s	TRANSISTOR DTC124EK
Q800	8-729-402-84	s	TRANSISTOR XN4601
Q801	8-729-402-84	s	TRANSISTOR XN4601
Q802	8-729-402-84	s	TRANSISTOR XN4601
Q804	8-729-420-36	s	TRANSISTOR XN2501
Q805	8-729-420-36	s	TRANSISTOR XN2501
Q806	8-729-420-36	s	TRANSISTOR XN2501
Q807	8-729-402-13	s	TRANSISTOR XN1501
Q808	8-729-402-13	s	TRANSISTOR XN1501
Q809	8-729-402-13	s	TRANSISTOR XN1501
Q810	8-729-122-63	s	TRANSISTOR 2SA1226
Q811	8-729-122-63	s	TRANSISTOR 2SA1226
Q812	8-729-122-63	s	TRANSISTOR 2SA1226
Q813	8-729-420-36	s	TRANSISTOR XN2501
Q814	8-729-420-36	s	TRANSISTOR XN2501
Q815	8-729-420-36	s	TRANSISTOR XN2501
Q816	8-729-402-87	s	TRANSISTOR XN2401
Q817	8-729-402-87	s	TRANSISTOR XN2401
Q818	8-729-402-87	s	TRANSISTOR XN2401
Q1000	8-729-901-00	s	TRANSISTOR DTC124EK
Q1001	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1002	8-729-901-00	s	TRANSISTOR DTC124EK
Q1003	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1004	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1005	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1006	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1007	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1008	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1009	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1010	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1011	8-729-901-00	s	TRANSISTOR DTC124EK
Q1012	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1013	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1014	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1015	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1016	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1017	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1018	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1019	8-729-901-00	s	TRANSISTOR DTC124EK
Q1020	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1021	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1022	8-729-901-00	s	TRANSISTOR DTC124EK
Q1025	8-729-901-05	s	TRANSISTOR DTA124EK
Q1026	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1028	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1029	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1030	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1031	8-729-402-13	s	TRANSISTOR XN1501
Q1032	8-729-402-13	s	TRANSISTOR XN1501
Q1033	8-729-402-13	s	TRANSISTOR XN1501
Q1034	8-729-122-63	s	TRANSISTOR 2SA1226
Q1035	8-729-122-63	s	TRANSISTOR 2SA1226
Q1036	8-729-122-63	s	TRANSISTOR 2SA1226
Q1037	8-729-420-36	s	TRANSISTOR XN2501

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Ref. No. or Q'ty	Part No.	SP	Description
Q1038	8-729-420-36	s	TRANSISTOR XN2501
Q1039	8-729-420-36	s	TRANSISTOR XN2501
Q1040	8-729-402-87	s	TRANSISTOR XN2401
Q1041	8-729-402-87	s	TRANSISTOR XN2401
Q1042	8-729-402-87	s	TRANSISTOR XN2401
Q1044	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1045	8-729-402-84	s	TRANSISTOR XN4601
Q1046	8-729-402-84	s	TRANSISTOR XN4601
Q1047	8-729-402-84	s	TRANSISTOR XN4601
Q1048	8-729-402-84	s	TRANSISTOR XN4601
Q1049	8-729-402-13	s	TRANSISTOR XN1501
Q1050	8-729-402-84	s	TRANSISTOR XN4601
Q1051	8-729-402-84	s	TRANSISTOR XN4601
Q1052	8-729-420-36	s	TRANSISTOR XN2501
Q1055	8-729-402-87	s	TRANSISTOR XN2401
Q1058	8-729-122-63	s	TRANSISTOR 2SA1226
Q1060	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1062	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q1063	8-729-901-05	s	TRANSISTOR DTA124EK

<RESISTOR>

R101	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R102	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R103	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R107	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R108	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R109	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R110	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R111	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R112	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R113	1-216-035-00	s	METAL, CHIP 270 5% 1/10W
R114	1-216-035-00	s	METAL, CHIP 270 5% 1/10W
R115	1-216-035-00	s	METAL, CHIP 270 5% 1/10W
R116	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R117	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R118	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R119	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R120	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R121	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R128	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R129	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R130	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R131	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R132	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R133	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R134	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R300	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R301	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R302	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R303	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R304	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R305	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R306	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R307	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R308	1-216-085-00	s	METAL, CHIP 33K 5% 1/10W
R309	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R310	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R311	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R312	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R313	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R314	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R315	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R316	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R317	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R318	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R319	1-216-043-00	s	METAL, CHIP 560 5% 1/10W
R320	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R321	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R322	1-216-101-00	s	METAL, CHIP 150K 5% 1/10W
R323	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R324	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R325	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R326	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R327	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R328	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R329	1-216-035-00	s	METAL, CHIP 270 5% 1/10W
R330	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R331	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R332	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R333	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R334	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R335	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R336	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R337	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R338	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R339	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R340	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R341	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R342	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R343	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R344	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R345	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R346	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R347	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R348	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R349	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R350	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R351	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R352	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R353	1-216-079-00	s	METAL, CHIP 18K 5% 1/10W
R354	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R355	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R356	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R357	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R358	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R359	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R360	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R361	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R362	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R363	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R364	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R365	1-216-017-00	s	METAL, CHIP 47 5% 1/10W
R366	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R367	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R368	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R369	1-216-039-00	s	METAL, CHIP 390 5% 1/10W
R370	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R371	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R372	1-216-295-00	s	METAL, CHIP 0 5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R373	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R374	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R375	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R376	1-216-039-00	s	METAL, CHIP 390 5% 1/10W
R377	1-216-039-00	s	METAL, CHIP 390 5% 1/10W
R378	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R379	1-216-089-00	s	METAL, CHIP 47K 5% 1/10W
R380	1-216-133-00	s	METAL, CHIP 3.3M 5% 1/10W
R381	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R382	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R383	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R384	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R385	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R386	1-216-047-00	s	METAL, CHIP 820 5% 1/10W
R387	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R388	1-216-031-00	s	METAL, CHIP 180 5% 1/10W
R389	1-216-133-00	s	METAL, CHIP 3.3M 5% 1/10W
R390	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R391	1-216-309-00	s	METAL 5.6 5% 1/10W
R392	1-216-309-00	s	METAL 5.6 5% 1/10W
R393	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R394	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R395	1-216-071-00	s	METAL, CHIP 8.2K 5% 1/10W
R396	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R397	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R399	1-216-059-00	s	METAL, CHIP 2.7K 5% 1/10W
R400	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R401	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R402	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R403	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R404	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R405	1-216-093-00	s	METAL, CHIP 68K 5% 1/10W
R406	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R407	1-216-093-00	s	METAL, CHIP 68K 5% 1/10W
R408	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R409	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R410	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R411	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R412	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R413	1-216-077-00	s	METAL, CHIP 15K 5% 1/10W
R414	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R415	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R416	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R417	1-216-071-00	s	METAL, CHIP 8.2K 5% 1/10W
R418	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R501	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R502	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R600	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R601	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R602	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R603	1-216-067-00	s	METAL, CHIP 5.6K 5% 1/10W
R604	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R605	1-216-079-00	s	METAL, CHIP 18K 5% 1/10W
R606	1-216-059-00	s	METAL, CHIP 2.7K 5% 1/10W
R607	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R608	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R609	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R610	1-216-043-00	s	METAL, CHIP 560 5% 1/10W
R611	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R612	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R613	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R614	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R615	1-216-089-00	s	METAL, CHIP 47K 5% 1/10W
R616	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R617	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R618	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R619	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R620	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R621	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R622	1-216-077-00	s	METAL, CHIP 15K 5% 1/10W
R623	1-216-071-00	s	METAL, CHIP 8.2K 5% 1/10W
R624	1-216-061-00	s	METAL, CHIP 3.3K 5% 1/10W
R625	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R626	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R627	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R629	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R632	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R633	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R634	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R635	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R639	1-216-101-00	s	METAL, CHIP 150K 5% 1/10W
R640	1-216-079-00	s	METAL, CHIP 18K 5% 1/10W
R641	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R642	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R644	1-216-075-00	s	METAL, CHIP 12K 5% 1/10W
R646	1-216-099-00	s	METAL, CHIP 120K 5% 1/10W
R647	1-216-113-00	s	METAL, CHIP 470K 5% 1/10W
R648	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R649	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R650	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R654	1-216-665-11	s	METAL, CHIP 3.9K 0.5% 1/10W
R656	1-216-067-00	s	METAL, CHIP 5.6K 5% 1/10W
R657	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R658	1-216-091-00	s	METAL, CHIP 56K 5% 1/10W
R659	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R660	1-216-085-00	s	METAL, CHIP 33K 5% 1/10W
R800	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R801	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R802	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R803	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R804	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R805	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R806	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R807	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R808	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R809	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R810	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R811	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R814	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R820	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R822	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R828	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R829	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R830	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R831	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R832	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R833	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R834	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R835	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R836	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R837	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R838	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R839	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R840	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R841	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R842	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R843	1-216-309-00	s	METAL 5.6 5% 1/10W
R844	1-216-309-00	s	METAL 5.6 5% 1/10W
R845	1-216-309-00	s	METAL 5.6 5% 1/10W
R846	1-216-309-00	s	METAL 5.6 5% 1/10W
R847	1-216-309-00	s	METAL 5.6 5% 1/10W
R848	1-216-309-00	s	METAL 5.6 5% 1/10W
R849	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R850	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R851	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R852	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R853	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R854	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R1000	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1001	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R1002	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1003	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1004	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1005	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1007	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1008	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1009	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1010	1-216-085-00	s	METAL, CHIP 33K 5% 1/10W
R1011	1-216-071-00	s	METAL, CHIP 8.2K 5% 1/10W
R1012	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1013	1-216-085-00	s	METAL, CHIP 33K 5% 1/10W
R1014	1-216-071-00	s	METAL, CHIP 8.2K 5% 1/10W
R1015	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1016	1-216-085-00	s	METAL, CHIP 33K 5% 1/10W
R1017	1-216-071-00	s	METAL, CHIP 8.2K 5% 1/10W
R1018	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1019	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R1020	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R1021	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R1022	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R1023	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R1024	1-216-029-00	s	METAL, CHIP 150 5% 1/10W
R1025	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1026	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1027	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1028	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1029	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1030	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1031	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1032	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R1033	1-216-045-00	s	METAL, CHIP 680 5% 1/10W
R1034	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1035	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1036	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1037	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1038	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1039	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1040	1-216-035-00	s	METAL, CHIP 270 5% 1/10W
R1041	1-216-035-00	s	METAL, CHIP 270 5% 1/10W
R1042	1-216-035-00	s	METAL, CHIP 270 5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R1043	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1044	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1045	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1046	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1047	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1048	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1049	1-216-045-00	s	METAL, CHIP 680 5% 1/10W
R1050	1-216-045-00	s	METAL, CHIP 680 5% 1/10W
R1051	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1052	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1053	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1054	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1055	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1056	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1057	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1058	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1059	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1060	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1061	1-216-089-00	s	METAL, CHIP 47K 5% 1/10W
R1062	1-216-079-00	s	METAL, CHIP 18K 5% 1/10W
R1063	1-216-077-00	s	METAL, CHIP 15K 5% 1/10W
R1064	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1065	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1068	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1070	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1073	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1074	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1075	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1079	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1081	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1084	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1085	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1086	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1087	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1088	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1089	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1090	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1091	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1092	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1093	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1094	1-216-027-00	s	METAL, CHIP 120 5% 1/10W
R1095	1-216-031-00	s	METAL, CHIP 180 5% 1/10W
R1096	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1098	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1101	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1102	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R1103	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W
R1107	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R1108	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R1109	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1110	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1111	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R1112	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1113	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1115	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1116	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R1117	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1118	1-216-105-00	s	METAL 220K 5% 1/10W
R1119	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1120	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W

(VA-7 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1121	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1122	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1123	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1124	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1125	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R1126	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R1127	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R1128	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1129	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1130	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1131	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1132	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1133	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1134	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1135	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1136	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1137	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1138	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1139	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1140	1-216-309-00	s	METAL 5.6 5% 1/10W
R1141	1-216-309-00	s	METAL 5.6 5% 1/10W
R1142	1-216-309-00	s	METAL 5.6 5% 1/10W
R1143	1-216-309-00	s	METAL 5.6 5% 1/10W
R1144	1-216-309-00	s	METAL 5.6 5% 1/10W
R1145	1-216-309-00	s	METAL 5.6 5% 1/10W
R1146	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1150	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1151	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R1153	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1154	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R1155	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1156	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1157	1-216-309-00	s	METAL 5.6 5% 1/10W
R1158	1-216-309-00	s	METAL 5.6 5% 1/10W
R1159	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1160	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R1161	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R1162	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R1163	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1164	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1165	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R1166	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1167	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1168	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R1169	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1170	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1171	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R1172	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1176	1-216-051-00	s	METAL, CHIP 1.2K 5% 1/10W
R1177	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1178	1-216-309-00	s	METAL 5.6 5% 1/10W
R1179	1-216-309-00	s	METAL 5.6 5% 1/10W
R1180	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1181	1-216-309-00	s	METAL 5.6 5% 1/10W
R1182	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1183	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R1186	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R1187	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1189	1-216-309-00	s	METAL 5.6 5% 1/10W
R1190	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W

(VA-7 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R1191	1-216-309-00	s	METAL 5.6 5% 1/10W
R1192	1-216-309-00	s	METAL 5.6 5% 1/10W
R1193	1-216-027-00	s	METAL, CHIP 120 5% 1/10W
R1194	1-216-031-00	s	METAL, CHIP 180 5% 1/10W
R1195	1-216-027-00	s	METAL, CHIP 120 5% 1/10W
R1196	1-216-031-00	s	METAL, CHIP 180 5% 1/10W
R1197	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1198	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R1199	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R1200	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
			<ADJUSTABLE RESISTOR>
RV101	1-237-032-11	s	RES, ADJ, METAL 500
RV102	1-237-032-11	s	RES, ADJ, METAL 500
RV103	1-237-032-11	s	RES, ADJ, METAL 500
RV301	1-237-038-11	s	RES, ADJ, METAL 50K
RV302	1-237-035-11	s	RES, ADJ, METAL 5K
RV303	1-237-035-11	s	RES, ADJ, METAL 5K
RV304	1-237-035-11	s	RES, ADJ, METAL 5K
RV305	1-237-033-11	s	RES, ADJ, METAL 1K
RV306	1-237-033-11	s	RES, ADJ, METAL 1K
RV307	1-237-032-11	s	RES, ADJ, METAL 500
RV308	1-237-032-11	s	RES, ADJ, METAL 500
RV400	1-237-035-11	s	RES, ADJ, METAL 5K
RV1001	1-237-032-11	s	RES, ADJ, METAL 500
RV1002	1-237-032-11	s	RES, ADJ, METAL 500
RV1003	1-237-032-11	s	RES, ADJ, METAL 500
RV1007	1-237-033-11	s	RES, ADJ, METAL 1K
			<CRYSTAL>
X301	1-579-466-11	s	VIBRATOR, CRYSTAL 3.579545MHz
X302	1-579-661-21	s	OSCILLATOR, CRYSTAL 4.433619MHz
X303	1-760-593-21	s	VIBRATOR, CERAMIC 50.0KHz
X601	1-579-738-21	s	VIBRATOR, CRYSTAL 14.318182MHz
X602	1-579-780-21	s	VIBRATOR, CRYSTAL 17.734475MHz
X603	1-760-593-21	s	VIBRATOR, CERAMIC 50.0KHz
X1002	1-579-780-21	s	VIBRATOR, CRYSTAL 17.734475MHz
X1003	1-760-213-21	s	VIBRATOR, CRYSTAL 14.1875MHz
X1004	1-579-738-21	s	VIBRATOR, CRYSTAL 14.318182MHz

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Ne les remplacer que par une piece portant le numero specifie.

SWITCHING REGURATOR

Ref. No. or Q'ty	Part No.	SP	Description
1pc	⚠1-468-006-11	o	SWITCHING REGURATOR
	PR-930010 BOARD		
	**********		
1pc	9-909-576-01	o	PRINTED CIRCUIT BOARD, PR-930010
2pcs	9-909-593-01	s	CLIP, FUSE
2pcs	9-909-594-01	s	CLIP, FUSE
	<CAPACITOR>		
C12	1-104-781-51	s	ELECT 22uF 20% 25V
C21	1-137-111-11	s	FILM 1uF 20% 250V
C22	1-136-311-11	s	FILM 0.47uF 20% 125V
C23	9-909-614-01	s	CERAMIC 470PF 250V
C24	9-909-614-01	s	CERAMIC 470PF 250V
C26	⚠1-137-524-11	s	FILM 0.22uF 20% 250V
C28	9-909-616-01	s	ELECT 220uF 400V
C29	9-909-617-01	s	CERAMIC 2200PF 1KV
C31-1	9-909-618-01	s	CERAMIC 330PF 2KV
C31-2	9-909-618-01	s	CERAMIC 330PF 2KV
C32	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C33	9-909-619-01	s	CERAMIC 1500PF 250V
C38	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C40	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C41	1-126-808-11	s	ELECT 4.7uF 20% 50V
C42	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C43	1-126-101-11	s	ELECT 100uF 20% 16V
C44	1-126-795-11	s	ELECT 10uF 20% 50V
C45	1-163-021-91	s	CERAMIC 0.01uF 10% 50V
C46	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C47	1-104-788-51	s	ELECT 22uF 20% 35V
C48	1-126-795-11	s	ELECT 10uF 20% 50V
C51	9-901-963-01	s	CERAMIC 1000PF 1KV
C52	9-901-963-01	s	CERAMIC 1000PF 1KV
C53	1-104-687-11	s	ELECT 2700uF 20% 35V
C54	1-104-687-11	s	ELECT 2700uF 20% 35V
C55	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C57	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C58	1-124-534-11	s	ELECT 680uF 20% 16V
C60	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C63	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C64	9-909-621-01	s	ELECT 1800uF 25V
C65	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C66	9-909-620-01	s	ELECT 470uF 16V
C67	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C69	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C71	1-126-801-11	s	ELECT 1uF 20% 50V
C72	1-104-760-11	s	CERAMIC, CHIP 0.047uF 10% 50V
C73	1-124-482-11	s	ELECT 33uF 20% 35V
C74	1-126-803-11	s	ELECT 47uF 20% 50V
C75	1-104-760-11	s	CERAMIC, CHIP 0.047uF 10% 50V
C76	1-104-687-11	s	ELECT 2700uF 20% 35V
C77	1-164-222-11	s	CERAMIC 0.22uF 25V
C80	9-909-622-01	s	CERAMIC 330PF 1KV
C83	9-909-622-01	s	CERAMIC 330PF 1KV
C94	1-162-131-11	s	CERAMIC 220PF 10% 2KV
C96	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C99	9-909-623-01	s	CERAMIC 1500PF 1KV
C101	1-104-760-11	s	CERAMIC, CHIP 0.047uF 10% 50V

(SWITCHING REGURATOR)

Ref. No. or Q'ty	Part No.	SP	Description
C102	1-165-319-11	s	CERAMIC, CHIP 0.1uF 50V
C103	1-163-179-00	s	CERAMIC, CHIP 0.0047uF 10% 50V
C104	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C105	1-163-113-00	s	CERAMIC, CHIP 68PF 5% 50V
C106	9-909-629-01	s	CERAMIC 0.15uF 50V
C107	9-909-629-01	s	CERAMIC 0.15uF 50V
C108	1-163-133-00	s	CERAMIC, CHIP 470PF 5% 50V
C109	9-909-630-01	s	CERAMIC 0.1uF 630V
C111	9-909-624-01	s	FILM 0.47uF 630V
C112	9-909-625-01	s	FILM 0.22uF 630V
C113	1-128-226-11	s	ELECT 220uF 25% 50V
C114	1-104-760-11	s	CERAMIC, CHIP 0.047uF 10% 50V
	<CIRCUIT MODULE>		
CM41	9-909-606-01	s	MODULE, CIRCUIT
	<CONNECTOR & INLET>		
CN1	9-909-578-01	o	CONNECTOR 3P
CN5	9-909-579-01	o	CONNECTOR 12P
CN6	9-909-580-01	o	CONNECTOR 13P
CN7	9-909-581-01	o	CONNECTOR 18P
CN16	9-909-583-01	o	HEADER, PIN
CN21	9-909-582-01	o	HEADER, PIN
CN22	9-909-582-01	o	HEADER, PIN
CN50	⚠9-909-577-01	s	INLET
	<DIODE>		
D36	9-909-598-01	s	DIODE ERB37-10
D41	9-909-599-01	s	DIODE S2L20U
D43	8-719-510-26	s	DIODE D1NL20
D44	8-719-510-26	s	DIODE D1NL20
D46	8-719-510-26	s	DIODE D1NL20
D47	8-719-042-07	s	DIODE D1F60
D51	8-719-018-83	s	DIODE D2S4M
D52	8-719-018-83	s	DIODE D2S4M
D71	8-719-970-82	s	DIODE HSS82
D76	8-719-970-82	s	DIODE HSS82
D99		s	DIODE D2FS4
D111	8-719-510-02	s	DIODE D1NS4
RF21	9-909-601-01	s	DIODE BLOCK U6SB60
RF51	9-909-602-01	s	DIODE S20LC20U
RF111	9-909-603-01	s	DIODE S20L60
ZD14	8-719-017-39	s	DIODE HZM6.2NB2
ZD71	8-719-976-60	s	DIODE HZS5C-1
ZD72	8-719-934-17	s	DIODE HZS27-1L
	<FUSE>		
F1	⚠1-576-233-41	s	H.B.C. FUSE 6.3A 250V
F2	⚠1-576-233-41	s	H.B.C. FUSE 6.3A 250V
	<MOTOR>		
FAN1	9-909-626-01	s	MOTOR, FAN
	<COIL>		
L20		s	CORE
L21	9-909-586-01	s	COIL, CHOKE
L22	9-909-586-01	s	COIL, CHOKE
L33	9-909-591-01	s	CORE, BEADS

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Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

(SWITCHING REGURATOR)

Ref. No. or Q'ty	Part No.	SP	Description
L36	9-909-587-01	s	CORE, BEADS
L51	9-909-588-01	s	COIL, CHOKE
L53	9-909-587-01	s	CORE, BEADS
L54	9-909-587-01	s	CORE, BEADS
L55	9-909-589-01	s	COIL, CHOKE
L111	9-909-590-01	s	COIL, CHOKE
L112	9-909-591-01	s	CORE, BEADS
			<IC>
M62	9-909-604-01	s	IC HLE121R2M
M71	8-759-064-03	s	IC AN1431M
M72	9-909-627-01	s	IC TA75358F
M101	9-909-605-01	s	IC FA5331P
			<PHOTOCOUPLER>
PC41	8-749-923-50	s	PHOTOCOUPLER PC111YS
PC42	8-749-923-50	s	PHOTOCOUPLER PC111YS
			<TRANSISTOR>
Q21	9-909-595-01	s	TRANSISTOR 2SK1358
Q43	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q45	8-729-120-28	s	TRANSISTOR 2SC1623-L5L6
Q71	8-729-216-22	s	TRANSISTOR 2SA1162-G
Q111	9-909-597-01	s	TRANSISTOR 2SK2196
TH21	1-809-519-11	s	TRIAC AC10FGM-YP
TH22	8-729-101-31	s	TRANSISTOR N13T1
			<RESISTOR>
R1	1-216-248-00	s	METAL, CHIP 120K 5% 1/8W
R2	1-216-248-00	s	METAL, CHIP 120K 5% 1/8W
R3	1-216-246-00	s	METAL, CHIP 100K 5% 1/8W
R4	1-216-246-00	s	METAL, CHIP 100K 5% 1/8W
R5	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R6	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R7	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R8	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R9	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R10	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R11	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R12	1-216-245-00	s	METAL, CHIP 91K 5% 1/8W
R13	1-216-089-91	s	METAL 47K 5% 1/10W
R15	1-260-075-91	s	CARBON (SMALL) 8.2 5% 1/2W
R16	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R21	9-994-152-01	s	CARBON 220K 1W
R24	1-216-089-91	s	METAL 47K 5% 1/10W
R25	9-909-628-01	s	METAL, CHIP 56K 1/2W
R26	9-909-628-01	s	METAL, CHIP 56K 1/2W
R27	9-909-628-01	s	METAL, CHIP 56K 1/2W
R28	9-909-628-01	s	METAL, CHIP 56K 1/2W
R29	1-215-929-11	s	METAL 100K 5% 3W
R30	1-215-885-00	s	METAL 68 5% 2W
R31	9-907-607-01	s	WIREWOUND 5.6 5W
R32	1-216-075-00	s	METAL, CHIP 12K 5% 1/10W
R33	9-907-608-01	s	RES. FUSIBLE 15 5W
R34	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R38	9-907-609-01	s	METAL 0.39 5W
R41-1	9-994-152-01	s	CARBON 220K 1W
R41-2	1-216-449-11	s	METAL 56 5% 2W

(SWITCHING REGURATOR)

Ref. No. or Q'ty	Part No.	SP	Description
R43	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R44	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R45	1-216-063-00	s	METAL, CHIP 3.9K 5% 1/10W
R46	1-216-043-91	s	METAL, CHIP 560 5% 1/10W
R47	1-215-857-11	s	METAL 10 5% 1W
R52	1-216-400-11	s	METAL 8.2 5% 3W
R69	1-260-120-11	s	CARBON (SMALL) 56K 5% 1/2W
R70	1-260-099-11	s	CARBON (SMALL) 1K 5% 1/2W
R71	1-216-031-00	s	METAL, CHIP 180 5% 1/10W
R72	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R73	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R74	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R75	1-216-069-00	s	METAL, CHIP 6.8K 5% 1/10W
R76	1-216-091-00	s	METAL, CHIP 56K 5% 1/10W
R77	1-216-059-00	s	METAL, CHIP 2.7K 5% 1/10W
R78	1-216-055-00	s	METAL, CHIP 1.8K 5% 1/10W
R79	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R80	1-260-076-11	s	CARBON (SMALL) 10 5% 1/2W
R81	1-216-033-00	s	METAL, CHIP 220 5% 1/10W
R83	1-260-076-11	s	CARBON (SMALL) 10 5% 1/2W
R84	1-215-875-11	s	METAL 10K 5% 1W
R93	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R95	1-216-099-00	s	METAL, CHIP 120K 5% 1/10W
R101	1-216-198-00	s	METAL, CHIP 1K 5% 1/8W
R102	1-216-150-00	s	METAL, CHIP 10 5% 1/8W
R103	1-216-150-00	s	METAL, CHIP 10 5% 1/8W
R104	1-216-198-00	s	METAL, CHIP 1K 5% 1/8W
R105	1-216-246-00	s	METAL, CHIP 100K 5% 1/8W
R106	1-216-262-00	s	METAL, CHIP 470K 5% 1/8W
R107	1-216-230-00	s	METAL, CHIP 22K 5% 1/8W
R108	1-216-230-00	s	METAL, CHIP 22K 5% 1/8W
R109	1-216-198-00	s	METAL, CHIP 1K 5% 1/8W
R111	1-215-857-11	s	METAL 10 5% 1W
R113	9-909-610-01	s	METAL 0.15 5W
R114	9-909-610-01	s	METAL 0.15 5W
R115	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R116	1-216-121-00	s	METAL, CHIP 1M 5% 1/10W
R117	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R118	1-216-079-00	s	METAL, CHIP 18K 5% 1/10W
R120	1-216-143-00	s	METAL, CHIP 5.1 5% 1/8W
R121	1-216-143-00	s	METAL, CHIP 5.1 5% 1/8W
			<VARIABLE RESISTOR>
RV41	9-909-613-01	s	RES, VAR 2K 1/2W
RV71	9-909-611-01	s	RES, VAR 1K 1/2W
RV72	9-909-611-01	s	RES, VAR 1K 1/2W
RV111	9-909-613-01	s	RES, VAR 2K 1/2W
			<VARISTOR>
SA1	9-909-585-01	s	VARISTOR
			<SWITCH>
SW1	9-909-584-01	s	SWITCH
			<TRANSFORMER>
T11	⚠9-909-592-01	s	TRANSFORMER

(SWITCHING REGURATOR)

Ref. No. or Q'ty	Part No.	SP	Description
	PR-930017 BOARD **********		
1pc	9-909-631-01	o	PRINTED CIRCUIT BOARD, PR-930017
	<CAPACITOR>		
C11	1-124-903-11	s	ELECT 1uF 20% 50V
C49	1-104-788-51	s	ELECT 22uF 20% 35V
C56	9-909-652-01	s	ELECT 1000uF 35V
C59	9-901-964-01	s	ELECT 1200uF 35V
C61	9-901-964-01	s	ELECT 1200uF 35V
C62	1-126-942-61	s	ELECT 1000uF 20% 25V
C68	9-901-965-01	s	ELECT 2700uF 10V
C70	1-136-499-11	s	FILM 0.047uF 50V
C78	1-124-903-11	s	ELECT 1uF 20% 50V
C79	1-124-903-11	s	ELECT 1uF 20% 50V
C81	9-909-653-01	s	ELECT 1000uF 10V
C82	1-162-131-11	s	CERAMIC 220PF 10% 2KV
C85	9-909-654-01	s	ELECT 560uF 35V
C97	9-909-655-01	s	ELECT 120uF 16V
	<CONNECTOR>		
CN9	1-506-945-11	o	CONNECTOR 3P, MALE
CN10	9-909-632-01	o	HEADER, PIN
CN11	9-909-632-01	o	HEADER, PIN
CN12	9-909-583-01	o	HEADER, PIN
CN13	9-909-634-01	o	HEADER, PIN
CN14	9-909-632-01	o	HEADER, PIN
CN15	9-909-632-01	o	HEADER, PIN
CN20	9-909-635-01	o	HEADER, PIN
	<DIODE>		
D45	9-909-641-01	s	DIODE D1NL20U
D61	8-719-031-79	s	DIODE D5SC4M
D72	8-719-503-40	s	DIODE S3V40
D73	8-719-970-82	s	DIODE HSS82
RF52	8-719-510-12	s	DIODE D10SC4M
ZD42	8-719-910-82	s	DIODE HZ18-2L
ZD73	8-719-933-37	s	DIODE HZS6B2L
	<COIL>		
L52	9-909-636-01	s	COIL, CHOKE
L61	9-909-637-01	s	COIL, CHOKE
L62	9-909-638-01	s	COIL, CHOKE
	<IC>		
M51	8-759-098-24	s	IC PQ30RV11
M52	8-759-098-24	s	IC PQ30RV11
M61	9-909-644-01	s	IC HLE120R6M
M64	9-909-645-01	s	IC HLD05003M
	<TRANSISTOR>		
Q41	9-909-639-01	s	TRANSISTOR 2SC3456M
Q42	9-909-640-01	s	TRANSISTOR 2SC2655Y

(SWITCHING REGURATOR)

Ref. No. or Q'ty	Part No.	SP	Description
	<RESISTOR>		
R14	1-249-437-11	s	CARBON (SMALL) 47K 5% 1/4W
R17	9-909-646-01	s	RES. FUSIBLE 2K 1/2W
R48-1	9-994-152-01	s	CARBON 220K 1W
R48-2	9-909-647-01	s	CARBON 100K 1W
R49	9-909-648-01	s	METAL 4.7K 3W
R53	1-249-417-11	s	CARBON (SMALL) 1K 5% 1/4W
R55	1-249-411-11	s	CARBON (SMALL) 330 5% 1/4W
R56	1-249-411-11	s	CARBON (SMALL) 330 5% 1/4W
R61	1-249-428-11	s	CARBON (SMALL) 8.2K 5% 1/4W
R63	1-249-417-11	s	CARBON (SMALL) 1K 5% 1/4W
R64	9-901-950-01	s	METAL 0.05 2W
R65	9-901-950-01	s	METAL 0.05 2W
R66	1-249-393-11	s	CARBON (SMALL) 10 5% 1/4W
R67	1-249-417-11	s	CARBON (SMALL) 1K 5% 1/4W
R68	1-249-417-11	s	CARBON (SMALL) 1K 5% 1/4W
R82	1-215-893-11	s	METAL 1.5K 5% 2W
	<P.T.C. THERMISTOR>		
RT71	9-909-650-01	s	THERMISTOR, P.T.C.
	<ADJUSTABLE RESISTOR>		
RV51	1-224-927-00	s	RES, ADJ METAL 1K
RV52	1-224-927-00	s	RES, ADJ METAL 1K
RV61	1-224-927-00	s	RES, ADJ METAL 1K
	<THYRISTOR>		
TH71	9-909-643-01	s	THYRISTOR 5P4M

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
1pc	⚠1-468-006-11	o	SWITCHING REGURATOR
1pc	1-473-114-11	s	KEY BLOCK, MAIN
1pc	1-473-117-21	s	KEY BLOCK, CONTOROL(for UP-5600MD)
1pc	1-473-117-31	s	KEY BLOCK, CONTOROL(for UP-5600MDP)
1pc	1-473-126-11	s	INDICATOR UNIT, LIQUID CRYSTAL
1pc	1-500-199-11	s	HEAD, THERMAL (LV5412)
1pc	1-698-549-11	s	FAN, DC
1pc	1-698-555-11	s	MOTOR, STEPPING (PM42S-048-SNA6)
1pc	1-769-480-11	s	WIRE (FLAT TYPE)(28 CORE)
1pc	1-769-481-11	s	WIRE (FLAT TYPE)(18 CORE)
1pc	1-769-482-11	s	WIRE (FLAT TYPE)(18 CORE)
1pc	1-769-487-11	s	CORD, CONNECTION (20 CORE)
2pcs	1-769-488-11	s	CORD, CONNECTION (18 CORE)
1pc	1-769-489-11	s	CORD, CONNECTION (17 CORE)
1pc	1-769-490-11	s	CORD, CONNECTION (14 CORE)
1pc	1-769-491-11	s	CORD, CONNECTION (12 CORE)
1pc	1-769-493-11	s	CORD, CONNECTION (12 CORE)
1pc	1-769-495-11	s	CORD, CONNECTION (9 CORE)
1pc	1-769-496-11	s	CORD, CONNECTION (13 CORE FLAT)
1pc	1-769-497-11	s	CORD, CONNECTION (25 CORE FLAT)
1pc	1-954-324-11	o	HARNESS, SUB (SE-47)
1pc	1-954-327-11	o	HARNESS, SUB (SE-54)
1pc	1-954-331-11	o	HARNESS, SUB (PWR-IF)
1pc	1-954-332-11	o	HARNESS, SUB (PWR-PRT)
1pc	1-954-333-11	o	HARNESS, SUB (IF31-35)
1pc	1-954-334-12	o	HARNESS, SUB (VA-SY10)
1pc	1-954-335-12	o	HARNESS, SUB (VA-SY12)
1pc	1-954-336-12	o	HARNESS, SUB (VA-IF10)

PACKING MATERIALS & SUPPLIED ACCESSORIES

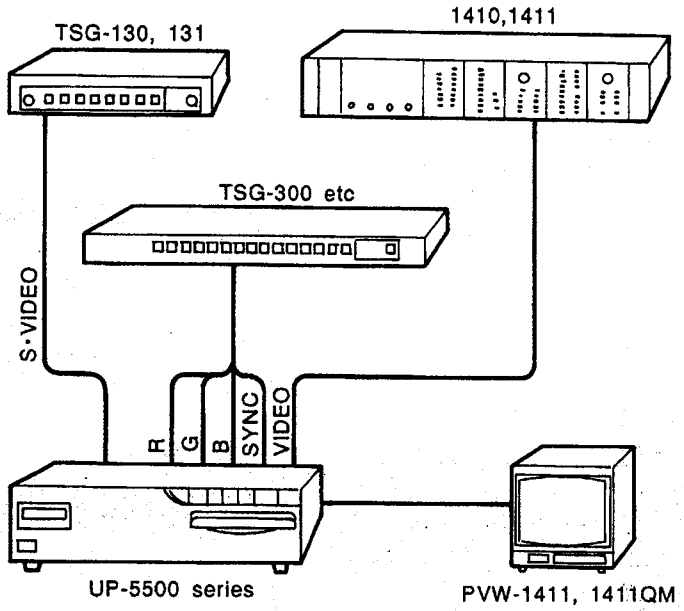
Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8278-124-A	s	HOLDER ASSY, RIBBON
1pc	A-8278-133-B	s	TRAY ASSY, PAPER SUPPLY
1pc	⚠1-558-527-11	s	CORD, POWER(for UP-5600MD)
1pc	⚠1-590-910-11	s	CORD SET, POWER(for UP-5600MDP)
1pc	3-685-292-01	o	TRAY, PAPER EJECT
1pc	3-685-517-01	o	INDIVIDUAL CARTON(for UP-5600MD)
1pc	3-685-518-01	o	INDIVIDUAL CARTON(for UP-5600MDP)
1pc	3-686-166-01	o	CUSHION, TOP
1pc	3-686-167-01	o	CUSHION, BOTTOM
1pc	3-798-157-11	s	MANUAL, INSTRUCTION

HARDWARE LIST

Ref. No. or Q'ty	Part No.	SP	Description
	7-621-255-35	s	SCREW +P 2X5
	7-621-772-00	s	SCREW +B 2X3
	7-623-422-07	s	LW 3, TYPE B
	7-624-198-01	s	STOP RING 8, TYPE C
	7-627-454-58	s	SCREW, PRECISION +K 2.6X6 TYPE1
	7-628-253-05	s	SCREW +PS 2X4
	7-682-645-04	s	SCREW +PS 3X4
	7-682-647-01	s	SCREW +PS 3X6
	7-682-649-09	s	SCREW +PS 3X10
	7-682-947-01	s	SCREW +PSW 3X6
	7-682-967-01	s	SCREW +PSW 4X25
	7-685-104-21	s	SCREW +P 2X6 TYPE2 SLIT
	7-685-105-19	s	SCREW +P 2X8 TYPE2 SLIT
	7-685-533-19	s	SCREW +BTP 2.6X6 TYPE2 N-S
	7-685-646-79	s	SCREW +BVTP 3X8 TYPE2 N-S
	7-685-871-01	s	SCREW +BVTT 3X6 (S)
	7-685-872-01	s	SCREW +BVTT 3X8 (S)
	7-685-872-09	s	SCREW +BVTT 3X8 (S)
	7-685-874-01	s	SCREW +BVTT 3X12 (S)
	7-688-001-01	s	W 2, MIDDLE
	7-688-003-11	s	W 3, MIDDLE
	7-688-005-01	s	W 5, SMALL

SECTION 7
ELECTRICAL ADJUSTMENT

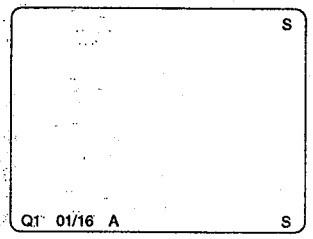
- COMPOSITE S.G
  FULL FIELD 75% COLOR BAR WHITE REF 100IRE (1410,1411,etc)
- S-VIDEO S.G (TSG-130,131,etc)
  FULL FIELD 75% COLOR BAR WHITE REF 100IRE(TSG130,131,etc) ANTI PAL (435P,etc)
- RGB S.G (TSG-300,etc)
  STEP
- Terminate the monitor output terminal in 75 ohms.
- UP-5500 series
  - VIDEO 75-ohm switch : ON
  - RGB 75-ohm switch : ON
- Set the NTSC/PAL switch according to the corresponding mode.



* This service mode is used for adjustment for each level when the VA-7 and FMY-17 boards, and components are replaced.

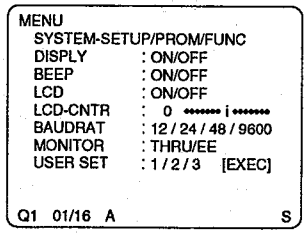
- How to enter the service mode (How to output atest signal)

(1) Press the [←] and [→] keys simultaneously and turn on the power switch. The unit is then put into the service mode.



(Monitor)

(2) Press the [MENU] button to display the MENU screen.



(3) Move the cursor > to the [SYSTEM-SET UP/PRN/FUNC] position and select a test signal using the [←] key. Press the [EXEC] key to display the [SERVICE MENU TOTAL : ···] screen.

```
MENU
▶SYSTEM-SETUP/PROM/FUNC
  DISPLY        : ON/OFF
  BEEP          : ON/OFF
  LCD           : ON/OFF
  LCD-CNTR      :  0 ••••••• i •••••••
  BAUDRAT       : 12 / 24 / 48 / 9600
  MONITOR       : THRU/EE
  USER SET      : 1 / 2 / 3   [EXEC]

Q1  01/16  A                        S
```

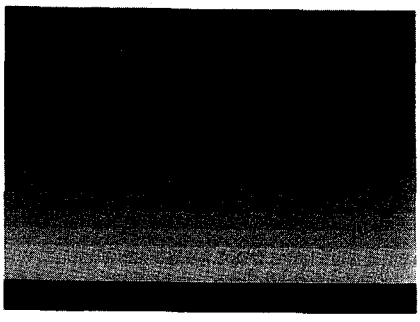
(4) Move the cursor > to the CPU DW : SET(V) position, select a test signal using the [←] and [→] keys, and press the [EXEC] key. The ① STEP(V) display* below then appears on the monitor.

(example)

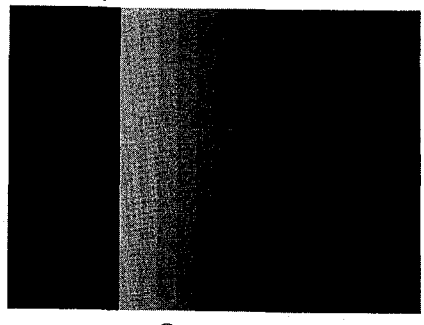
```
SERVICE MENU TOTAL : 65535
  SY VerB. 27   HEAD  : 65535
▶ CPU DW        : STEP (V)
  HEAD V        : 90 SAVE [EXEC]
  S-RESET       : PRESS [EXEC]
  LCD-CHK       : PRESS [EXEC]
  ANALOG
  ADJUSTMENT : ON/OFF

  H : 154  R : 156
Q1  01/16  A                        S
```

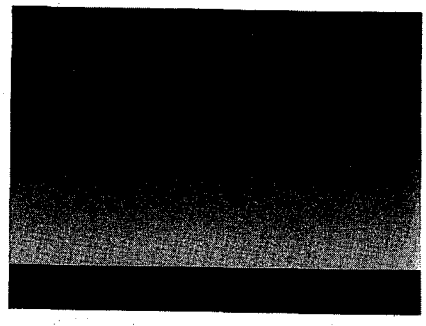
* No monitor signal is displayed when ANALOG ADJUSTMENT : ON/OFF is ON.



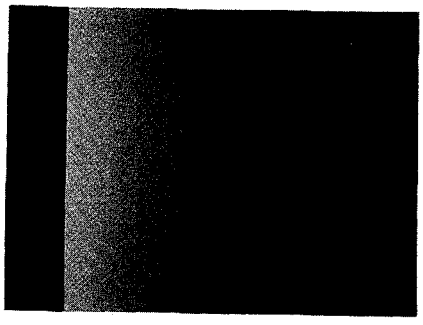
① STEP(V)



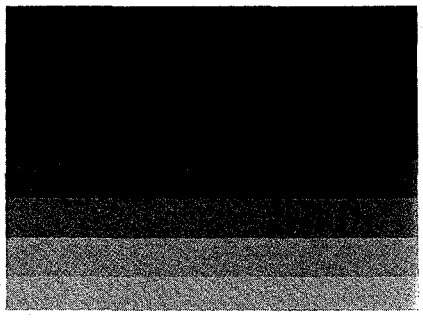
② STEP(H)



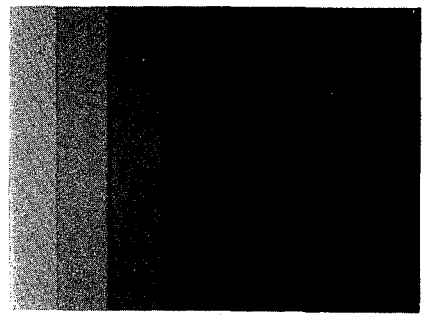
③ RAMP(V)



④ RAMP(H)

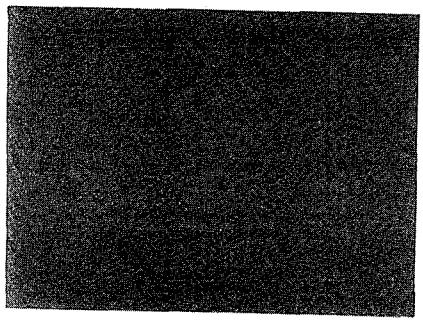


⑤ COLOR BAR(V)

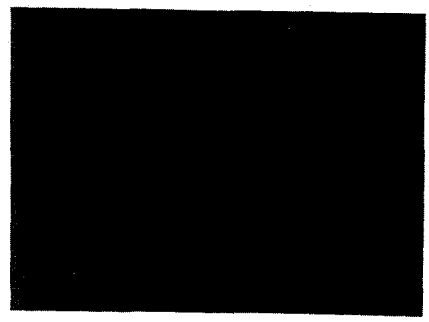


⑥ COLOR BAR(H)

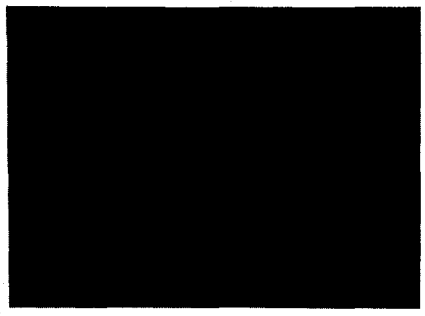
⑦ CAPTION



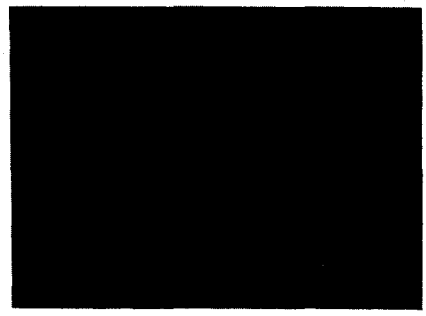
⑧ GRAY(C0h)



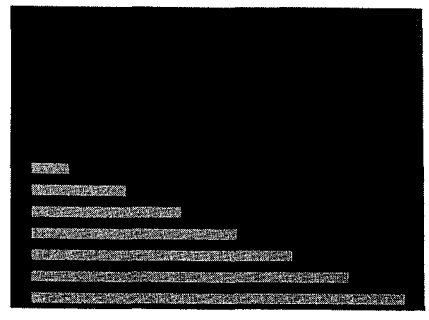
⑨ GRAY(80h)



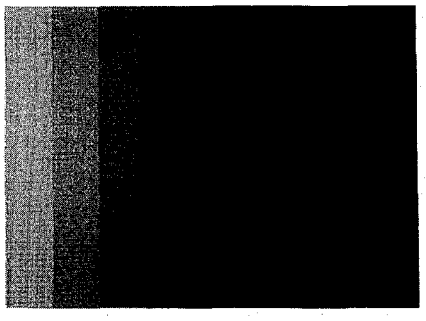
⑩ GRAY(40h)



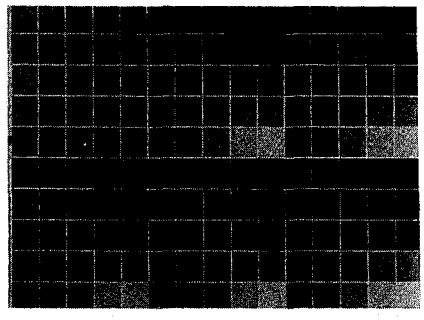
⑪ BLACK(00h)



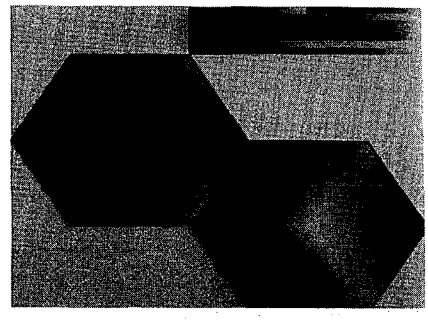
⑫ HAED



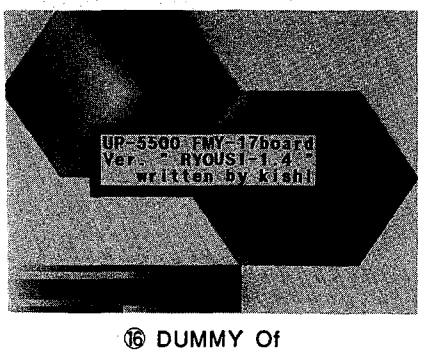
⑬ STEP VA



⑭ DUMMY Od

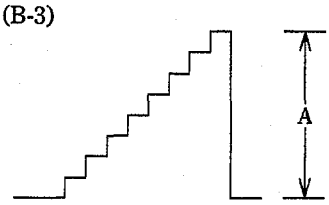


⑮ DUMMY Oe

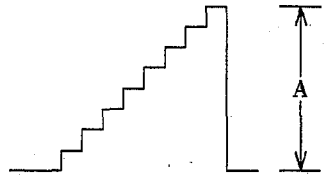


⑯ DUMMY Of

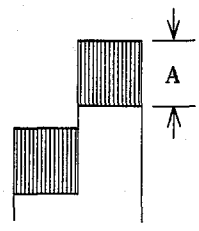
7-1. ENC R ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. CPU DW : STEP VA 2. ANALOG ADJ : OFF 3. SOURCE/MEMORY : MEMORY	TP1008(A-2) TPE1001(B-3)  A = 700 ± 20mV 10uS/div	RV1001(C-2) TRIG : TP1020(C-5)

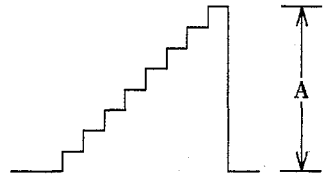
7-2. ENC B ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. CPU DW : STEP VA 2. ANALOG ADJ : OFF 3. SOURCE/MEMORY : MEMORY	TP1009(B-2) TPE1001(B-3)  A = 700 ± 20mV 10uS/div	RV1003(D-2) TRIG : TP1020(C-5)

7-3. CHROMA LEAK ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. CPU DW : STEP VA 2. ANALOG ADJ : OFF 3. SOURCE/MEMORY : MEMORY	TP1012(B-2) TPE1001(B-3)  A = Minimum	RV1002(D-2) TRIG : TP1020(C-5)

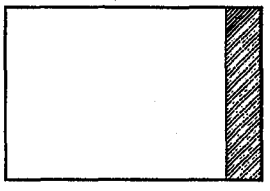
7-4. G MONI ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. CPU DW : STEP VA 2. ANALOG ADJ : OFF 3. SOURCE/MEMORY : MEMORY	TP1010(A-2) TPE1001(B-3)  A = 700 ± 20mV 10uS/div	RV1007(A-3) TRIG : TP1020(C-5)

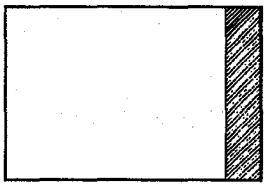
7-5. INT 4FSC ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. SOURCE/MEMORY : MEMORY 2. ANALOG ADJ : OFF	TP1016 (B-5) TPE1000 (B-5) 14.31818±80 MHz	◐ CV1004 (A-6)

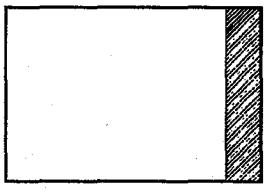
7-6. R IN ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = RGB SIGNAL = STEP 3. AGC : OFF	Monitor  Adjust so that the red area in the obliquely stripped portion is maximum.	◐ RV101 (G-2)

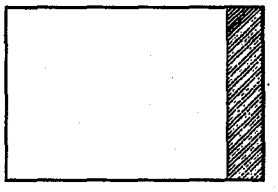
7-7. G IN ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = RGB SIGNAL = STEP 3. AGC : OFF	Monitor  Adjust so that the yellow area in the obliquely stripped portion is maximum.	◐ RV102 (H-2)

7-8. B IN ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = RGB SIGNAL = STEP 3. AGC : OFF	Monitor  Adjust so that the white area in the obliquely stripped portion is maximum.	◐ RV103 (H-2)

7-9. AGC REF ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = RGB SIGNAL = STEP 3. AGC : ON	Monitor  Adjust so that the white area in the obliquely stripped portion is maximum.	◐ RV400(E-2)

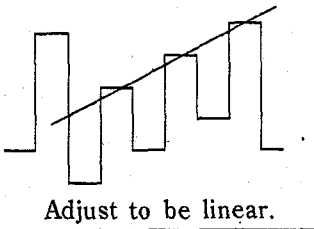
7-10. DCF CLK ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = NOTE	TP600(H-4) TPE302(H-2) 14.31818±80 MHz	◐ CV601(J-5)

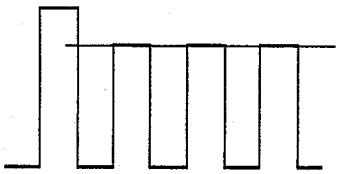
7-11. DECODER F0 ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = COLOR BAR 2. Turn RV301(D-6) clockwise as far as it will go. 3. After adjustment is completed, return RV301 to the center position.	IC305(D-5) 8P TPE306(F-5) 3.579545±20 MHz	◐ CV301(E-6)

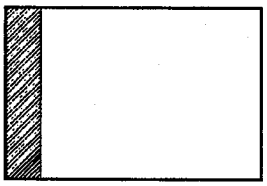
7-12. HUE ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = COLOR BAR 2. SOURCE/MEMORY : SOURCE 3. AGC : OFF	TP806(G-2) TPE802(F-2)  Adjust to be linear.	◐ RV303(E-3) TRIG : TP1020(C-5)

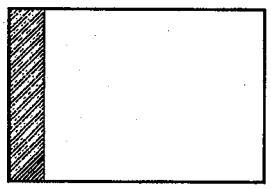
7-13. COLOR ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = COLOR BAR 2. SOURCE/MEMORY : SOURCE 3. AGC : OFF	TP806 (G-2) TPE802 (F-2)  Adjust to be horizontal.	◐ RV304 (E-3) TRIG : TP1020 (C-5)

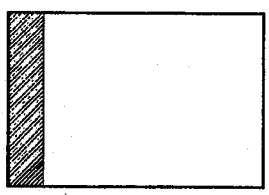
7-14. PIC ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = Y/C SIGNAL = COLOR BAR 3. SOURCE/MEMORY : SOURCE 4. AGC : OFF	Monitor  Adjust so that the green area in the obliquely stripped portion is maximum.	◐ RV302 (D-4)

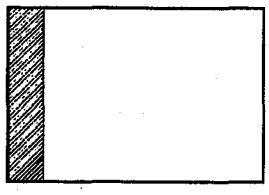
7-15. DEC R ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = Y/C SIGNAL = COLOR BAR 3. SOURCE/MEMORY : SOURCE 4. AGC : OFF	Monitor  Adjust so that the yellow area in the obliquely stripped portion is maximum.	◐ RV305 (F-5)

7-16. DEC B ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = Y/C SIGNAL = COLOR BAR 3. SOURCE/MEMORY : SOURCE 4. AGC : OFF	Monitor  Adjust so that the white area in the obliquely stripped portion is maximum.	◐ RV306 (F-5)

7-17. VBS Y ADJ (NTSC)

Conditions for adjustment	Spec.	Adjustment
1. ANALOG ADJ : ON 2. INPUT SELECT = VBS SIGNAL = COLOR BAR 3. SOURCE/MEMORY : SOURCE 4. AGC : OFF	Monitor  Adjust so that the white area in the obliquely stripped portion is maximum.	RV308 (G-4)

7-18. INT 4FSC ADJ (PAL)

Conditions for adjustment	Spec.	Adjustment
1. SOURCE/MEMORY : MEMORY	TP1015 (B-6) TPE1000 (B-5) 17.734475±80 MHz	CV1002 (A-6)

7-19. INT VCXO ADJ (PAL)

Conditions for adjustment	Spec.	Adjustment
1. SOURCE/MEMORY : MEMORY	TP1001 (B-6) TPE1000 (B-5) DC 2±0.2 V	CV1003 (A-6)

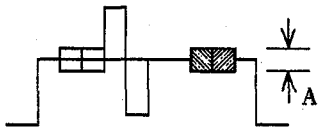
7-20. DCF CLK ADJ (PAL)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = NOTE	TP600 (H-4) TPE302 (H-2) 17.734475±80 MHz	CV602 (J-4)

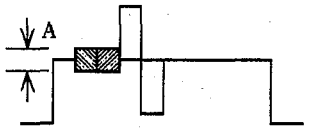
7-21. DECODER F0 ADJ (PAL)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = COLOR BAR 2. Turn RV301(D-6) clockwise as far as it will go. 3. After adjustment is completed, return RV301 to the center position.	IC305(DE-5) 10P TPE306(F-5) 4.433619±20 MHz	◐ CV302(D-6)

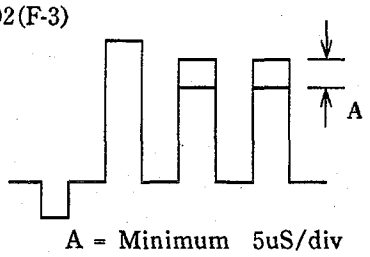
7-22. DLA ADJ (PAL)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = ANTI PAL 2. SOURCE/MEMORY : SOURCE	TP806(G-2) TPE802(F-3)  A = Minimum	◐ RV307(E-6) TRIG : TP1020(C-5)

7-23. PHASE ADJ (PAL)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = ANTI PAL 2. SOURCE/MEMORY : SOURCE	TP806(G-2) TPE802(F-3)  A = Minimum	◐ RV301(D-6) TRIG : TP1020(C-5)

7-24. DAT ADJ (PAL)

Conditions for adjustment	Spec.	Adjustment
1. INPUT SELECT = Y/C SIGNAL = COLOR BAR 2. SOURCE/MEMORY : SOURCE	TP806(G-2) TPE802(F-3)  A = Minimum 5uS/div	◐ LV301(C-6) TRIG : TP1020(C-5)

SECTION 8
MECHANICAL OPERATION

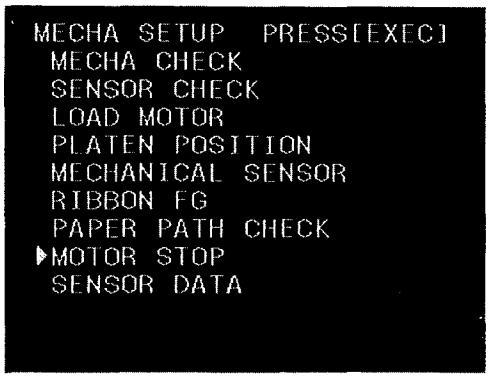
8-1. ENTERING THE MECHANICAL ADJUSTMENT MODE

Turn on the power switch [⏻] while pressing [←], [→], and [SAVE] keys.

* This adjustment mode is used for sensor level adjustment when the PRT-2, SE-44, and ZX-61 boards and each component are replaced.

8-2. PROCEDURE AND METHOD

- Connect a monitor to the printer. (If no monitor is available, the liquid-crystal display of the printer can be used.)
- Enter the mechanical adjustment mode, move the cursor to the item to be adjusted, and press the [EXEC] key.



- The adjustment result appears on the monitor and liquid-crystal display when the adjustment item is completed.

  OK H'B0
  NG NG command + data (Refer to the command list.)

(Adjustment example)
Sensor check [EXEC]
  OK H'B0
  NG H'E8 + H'81(The tray and head thermistor are NG.)

(1)Mechanical check

· Checks the communication with the SY board.
  1) Pull out the load tray and ribbon cassette from the unit.
  2) Press the [EXEC] key for mechanical check.

· Adjustment result

Result	Contents of display
OK	H'B0
NG	No answer

Note : For NG, it is impossible to execute the communication with the SY board. Therefore, the subsequent adjustments cannot be performed.

(2)Sensor check

· Each sensor check
  · PP-JAM sensor (Paper jamming detection)
  · LOAD-TMG sensor (Load edge detection)
  · PP-TYPE sensor (OHP/plain paper detection)
  · RBN-CST sensor (Ribbon cassette detection)
  · EJCT-TMG sensor (Eject error detection)
  · TRAY sensor (Tray detection)
  · Head thermistor check
  1) Pull out the load tray and ribbon cassette from the unit.
  2) Press the [EXEC] key for sensor check.

· Adjustment result

Result	Contents of display
OK	H'B0
NG	H'E8+H'## (NG+data)

Note : In case of NG, refer to the corresponding list.

(3)Load motor

· Load motor driving and load FG sensor check
  · Load motor driving
  · LOAD-FG sensor (Load value detection)
  1) Pull out the load tray and ribbon cassette from the unit.
  2) Press the [EXEC] key for a load motor.

· Adjustment result

Result	Contents of display
OK	H'B0
NG	H'EA

(4) Mechanical sensor

· System motor driving, mechanical sensor, and barcode sensor check
  · System motor driving
  · BARCODE-FG sensor (System motor drive detection)
  1) Pull out the load tray and ribbon cassette from the unit.
  2) Press the [EXEC] key for a mechanical sensor.

· Adjustment result

Result	Contents of display
OK	H'B0
NG	H'EA

(5)Platen position

· Step motor driving and platen position sensor check
  · Step motor driving
  · PLT-POS sensor (Platen home detection)
  1) Pull out the load tray and ribbon cassette from the unit.
  2) Press the [EXEC] key for platen position.

· Adjustment result

Result	Contents of display
OK	H'B0
NG	H'EA

(6)Ribbon FG

· Ribbon motor driving and ribbon FG sensor check
  · RBN-MOTOR driving
  · RBN-FG sensor (Ribbon rotation detection)
  1) Pull the load tray and ribbon cassette from the unit.
  2) Press the [EXEC] key for ribbon FG.

· Adjustment result

Result	Contents of display
OK	H'B0
NG	H'EA

(7)Paper path check

· Load and eject path check by the automatic adjustment loading of ribbon code sensor and barcode sensor
  · RBN-CD sensor (Ribbon code detection)
  · Barcode sensor (Ribbon barcode)
  · Load and eject operation
  1) Put one sheet of OHP paper in the load tray, then set.
  2) Prepare a ribbon for plain paper.
  3) Locate the beginning of the cyan portion manually so that a ribbon code is not put in the sensor position.
  4) Set the ribbon cassette.
  5) Press the [EXEC] key for paper path check.
  6) Perform the load and eject operation.

· Adjustment result

Result	Contents of display
OK	H'B0
NG	H'E9+H'## (NG+data)

Note : In case of NG, refer to the corresponding list.

(8)Motor stop

· All the motors stop.

(9)Sensor adjustment data check

· Displays the adjustment values of a paper type sensor, ribbon code sensor, ribbon FG sensor, and barcode sensor.

· Result (H'F1 + data 4)
  · H'F1+H'##(data 1)+H'##(data 2)+H'##(data 3)+H'##(data 4)

(Example)
H'F1+H'B3(data 1)+H'0A(data 2)+H'F2(data 3)+H'7E(data 4)
· Emission value of data 1 sensor 3.4 V=5×179/256
· Data 2 emission low level 0.2 V=5×10/256
· Data 3 emission high level 4.7 V=5×242/256
· Data 4 threshold 2.5 V=5×126/256

[Error data list]
· General display
  NG H'B0
  Error H'EA

· Sensor check
  Data of less than error command H'E8 +

[7] TRAY	[6] LD_TMG	[5] EJ_TMG	[4] RBN_CST
[3]	[2] PP_TYPE	[1]	[0] HED_THRM

· Paper path check
  Data of less than error command H'E9 +

[7] TRAY	[6]	[5]	[4]
[3]	[2] PP_TYPE	[1] RBN_CD	[0] BARCODE

· Others
  Data of less than error command H'E0 +

[7] Motor/sensor error	[6] Paper jamming	[5] Ribbon error
[4] No ribbon	[3] No paper	[2] Ribbon end
[1] Remove paper	[0] Media mismatch	

SONY

MEMORY BOARD

UPK-5500

SERVICE MANUAL

SAFETY RELATED COMPONENT WARNING

Components identified by shading and ⚠ marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

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SECTION 1
GENERAL

This section is extracted from instruction manual.

1-1. OVERVIEW

The UPK-5500 memory board adds four frames of memory to the Sony UP-5500 series color video printer.

1-2. INSTALLATION

Please ask your supplier for information about the installation and operation of the memory board.

1-3. SPECIFICATIONS

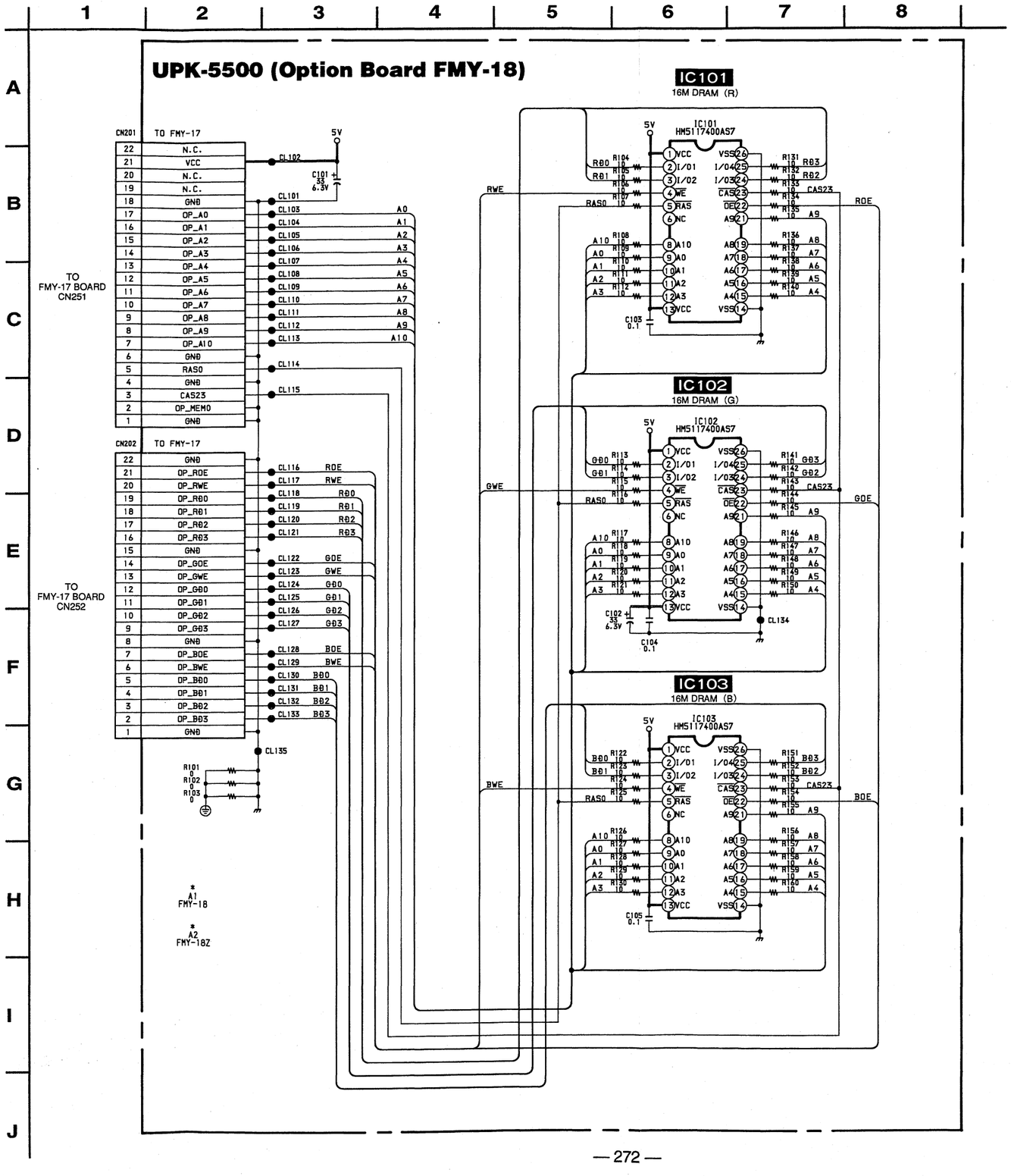
Memory capacity: 6 MB (4 frames)
Voltage: +5 V
Dimensions: 45 x 8 x 156 mm (1 4/5" x 1/3" x 6 1/7") (max., W x H x D)
Mass: 30 g (approx. 1 oz)

Design and specifications are subject to change without notice.

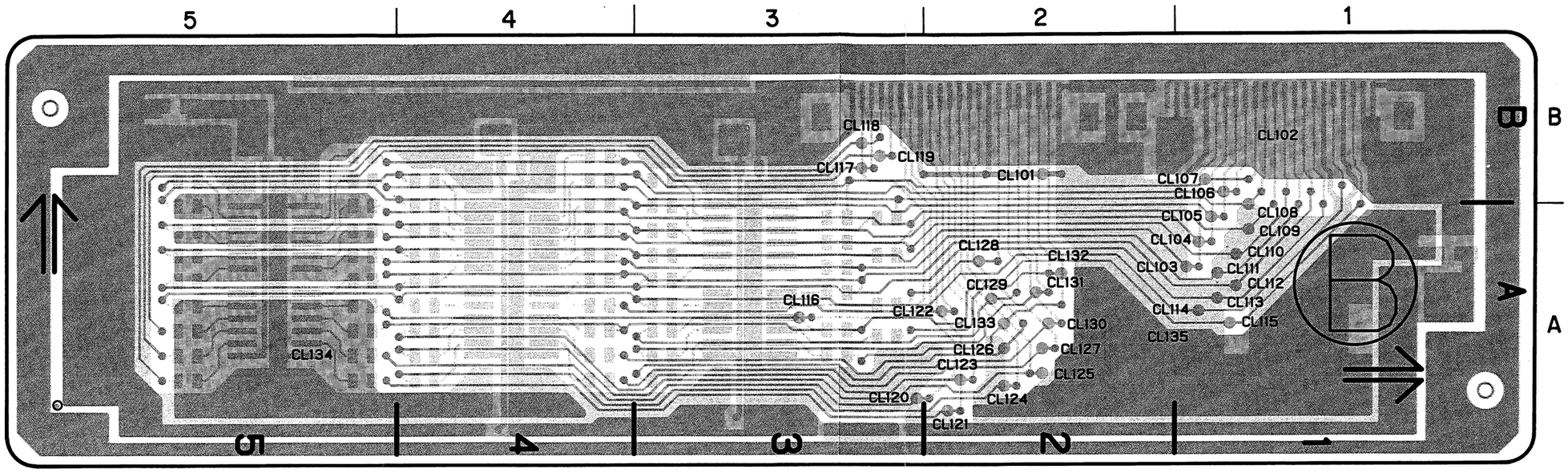
SECTION 2
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

2-1. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

FMY-18 (MEMORY BOARD)



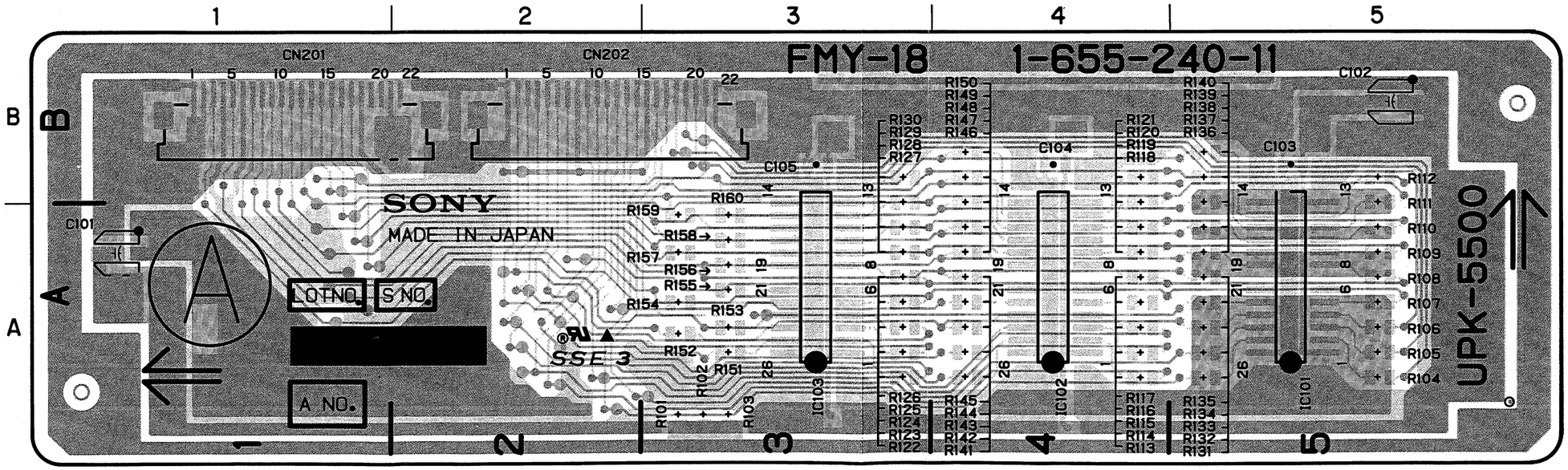
FMY-18 (MEMORY BOARD)



FMY-18 BOARD

CN201	B-1
CN202	B-2
IC101	A-5
IC102	A-4
IC103	A-3

FMY-18 -SOLDERING SIDE-
1-655-240-11



FMY-18 -COMPONENT SIDE-
1-655-240-11

MEMORY BOARD	MEMORY BOARD
FMY-18	FMY-18

SECTION 3
ELECTRICAL PARTS LIST

NOTE:
- Items marked "O" in the SP column are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise stated.

When indicating part by reference number, please include the board name.

RESISTORS
- All resistors are in ohms.
- F:non-flammable

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

FMY-18 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-575-A	o	MOUNTED CIRCUIT BOARD, FMY-18
1pc	1-769-486-11	s	CORD, CONNECTION (22 CORE)
			<CAPACITOR>
C101	1-104-608-11	s	ELECT 33uF 20% 6.3V
C102	1-104-608-11	s	ELECT 33uF 20% 6.3V
C103	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C104	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C105	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
			<CONNECTOR>
CN201	1-568-165-11	s	CONNECTOR, FPC 22P
CN202	1-568-165-11	s	CONNECTOR, FPC 22P
			<IC>
IC101	8-759-330-70	s	IC HM5117400AS7GSEL
IC102	8-759-330-70	s	IC HM5117400AS7GSEL
IC103	8-759-330-70	s	IC HM5117400AS7GSEL
			<RESISTOR>
R101	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R102	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R103	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R104	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R105	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R106	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R107	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R108	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R109	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R110	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R111	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R112	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R113	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R114	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R115	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R116	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R117	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R118	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R119	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R120	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R121	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R122	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R123	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R124	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R125	1-216-001-00	s	METAL, CHIP 10 5% 1/10W

(FMY-18 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R126	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R127	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R128	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R129	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R130	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R131	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R132	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R133	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R134	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R135	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R136	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R137	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R138	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R139	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R140	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R141	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R142	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R143	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R144	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R145	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R146	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R147	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R148	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R149	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R150	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R151	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R152	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R153	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R154	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R155	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R156	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R157	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R158	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R159	1-216-001-00	s	METAL, CHIP 10 5% 1/10W
R160	1-216-001-00	s	METAL, CHIP 10 5% 1/10W

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-798-160-11	s	MANUAL, INSTRUCTION
2pc	7-685-871-01	s	SCREW +BVTT 3X6 (S)

SONY

MEMORY BOARD

UPK-5501NP

SERVICE MANUAL

SECTION 1
GENERAL

SAFETY RELATED COMPONENT WARNING

Components identified by shading and ⚠ marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

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3. ELECTRICAL PARTS LIST 283

This section is extracted from instruction manual.

1-1. OVERVIEW

The UPK-5501NP memory board adds the capability of processing PAL signals to the Sony UP-5500 color video printers.

1-2. INSTALLATION

Please ask your supplier for information about the installation and operation of the memory board.

1-3. SPECIFICATIONS

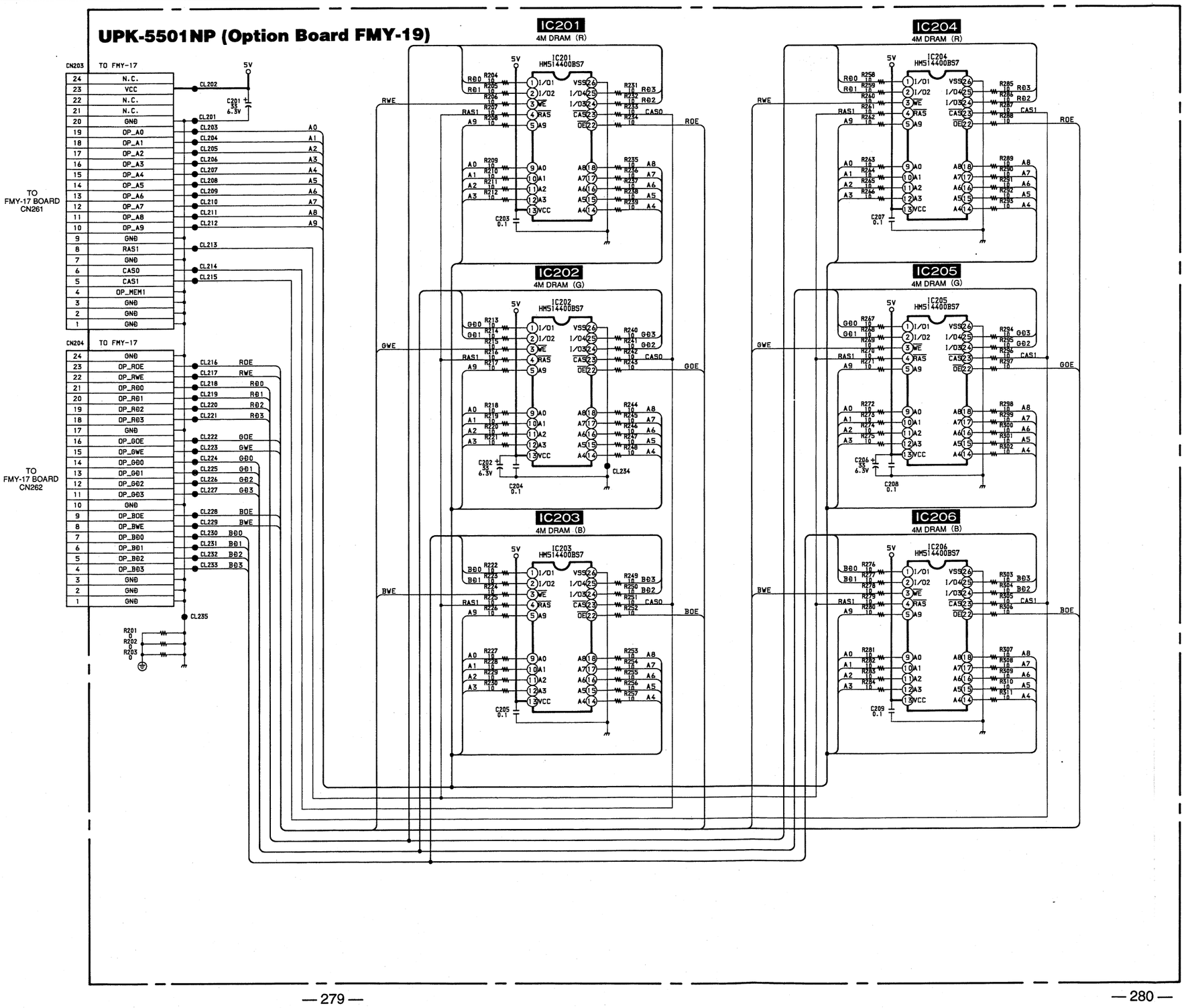
Memory capacity:	3 MB
Voltage:	+5 V
Dimensions:	45 x 8 x 156 mm (1 4/5" x 1/3" x 6 1/7") (max., W x H x D)
Weight:	35 g (approx. 1 1/4oz)

Design and specifications are subject to change without notice.

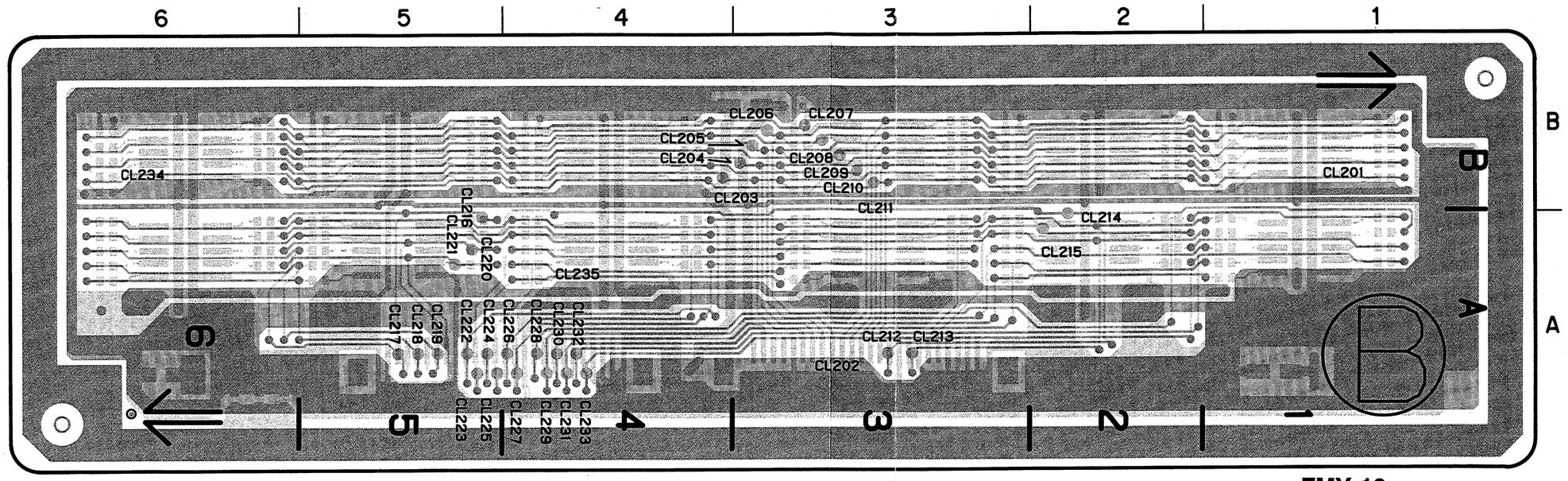
SECTION 2
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

2-1. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS FMY-19 (MEMORY BOARD)

UPK-5501NP (Option Board FMY-19)



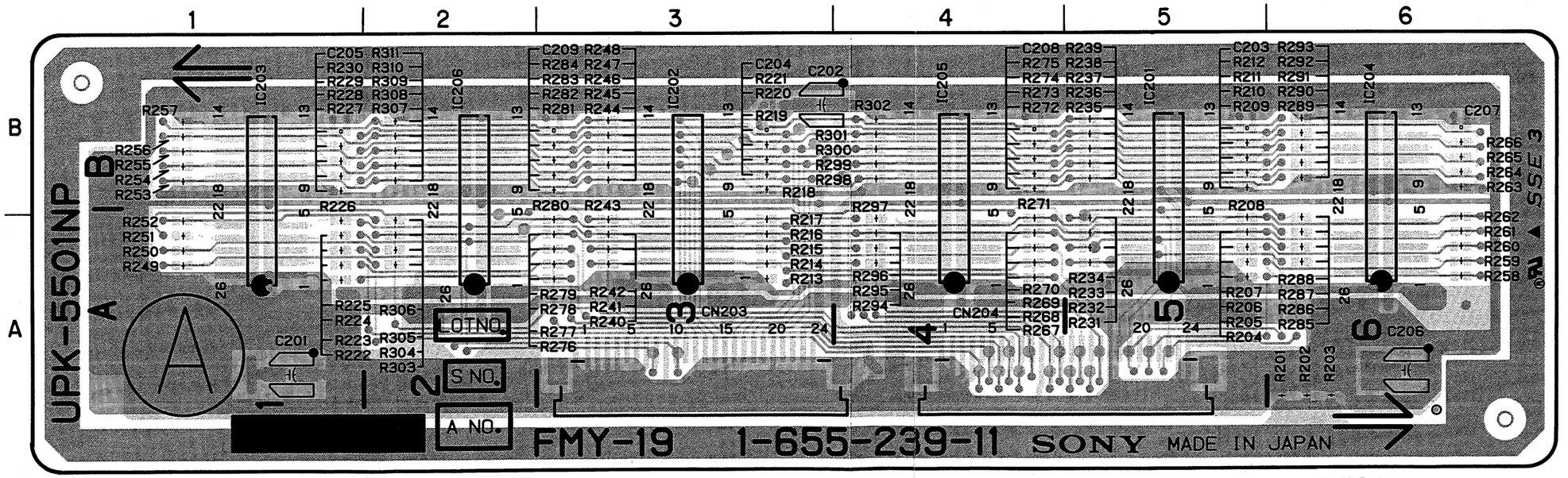
FMY-19 (MEMORY BOARD)



FMY-19 -SOLDERING SIDE-
1-655-239-11

FMY-19 BOARD

CN203	A-3
CN204	A-4
IC201	B-5
IC202	B-3
IC203	B-1
IC204	B-6
IC205	B-4
IC206	B-2



FMY-19 -COMPONENT SIDE-
1-655-239-11

MEMORY BOARD	MEMORY BOARD
FMY-19	FMY-19

SP0017 / Druck 42

SECTION 3
ELECTRICAL PARTS LIST

NOTE:
- Items marked "O" in the SP column are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise stated.

When indicating part by reference number, please include the board name.

RESISTORS
- All resistors are in ohms.
- F:non-flammable

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

FMY-19 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	A-8310-602-A	o	MOUNTED CIRCUIT BOARD, FMY-19
1pc	1-769-483-11	s	CORD, CONNECTION (24CORE)
1pc	1-769-484-11	s	CORD, CONNECTION (24CORE)
			<CAPACITOR>
C201	1-104-608-11	s	ELECT 33uF 20% 6.3V
C202	1-104-608-11	s	ELECT 33uF 20% 6.3V
C203	1-164-156-11	s	CERAMIC 0.1uF 25V
C204	1-164-156-11	s	CERAMIC 0.1uF 25V
C205	1-164-156-11	s	CERAMIC 0.1uF 25V
C206	1-104-608-11	s	ELECT 33uF 20% 6.3V
C207	1-164-156-11	s	CERAMIC 0.1uF 25V
C208	1-164-156-11	s	CERAMIC 0.1uF 25V
C209	1-164-156-11	s	CERAMIC 0.1uF 25V
			<CONNECTOR>
CN203	1-764-829-11	o	CONNECTOR, FPC 24P
CN204	1-764-829-11	o	CONNECTOR, FPC 24P
			<IC>
IC201	8-759-199-26	s	IC HM514400BS7GS-EL
IC202	8-759-199-26	s	IC HM514400BS7GS-EL
IC203	8-759-199-26	s	IC HM514400BS7GS-EL
IC204	8-759-199-26	s	IC HM514400BS7GS-EL
IC205	8-759-199-26	s	IC HM514400BS7GS-EL
IC206	8-759-199-26	s	IC HM514400BS7GS-EL
			<RESISTOR>
R201	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R202	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R203	1-216-864-11	s	METAL, CHIP 0 5% 1/16W
R204	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R205	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R206	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R207	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R208	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R209	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R210	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R211	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R212	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R213	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R214	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R215	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R216	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

(FMY-19 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R217	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R218	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R219	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R220	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R221	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R222	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R223	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R224	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R225	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R226	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R227	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R228	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R229	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R230	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R231	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R232	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R233	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R234	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R235	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R236	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R237	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R238	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R239	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R240	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R241	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R242	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R243	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R244	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R245	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R246	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R247	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R248	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R249	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R250	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R251	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R252	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R253	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R254	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R255	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R256	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R257	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R258	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R259	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R260	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R261	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

(FMY-19 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R262	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R263	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R264	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R265	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R266	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R267	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R268	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R269	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R270	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R271	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R272	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R273	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R274	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R275	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R276	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R277	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R278	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R279	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R280	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R281	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R282	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R283	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R284	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R285	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R286	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R287	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R288	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R289	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R290	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R291	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R292	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R293	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R294	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R295	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R296	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R297	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R298	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R299	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R301	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R302	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R303	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R304	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R305	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R306	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R307	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R308	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R309	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R310	1-216-797-11	s	METAL, CHIP 10 5% 1/16W
R311	1-216-797-11	s	METAL, CHIP 10 5% 1/16W

SONY

DIGITAL INTERFACE BOARD

UPK-5502SC

SERVICE MANUAL

SAFETY RELATED COMPONENT WARNING

Components identified by shading and ⚠ marked on the schematic diagrams and parts list are critical to safe operation. Replace these components with SONY parts whose part numbers appear as shown in this manual or in supplements published by SONY.

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1-1. ABOUT THE SCSI INTERFACE KIT

The SCSI Interface Kit provides the means for connecting the UP-5500 Series color video printer to your computer via the SCSI (Small Computer Systems Interface) bus. The Kit includes the following:

- SCSI Interface Board for the UP-5500 Series printer
- Photoshop plug-in software modules for using the UP-5500 with Adobe Photoshop (requires either Photoshop for Macintosh, or Photoshop for Windows, according to the type of host computer).

1-2. OPERATING MODES

With the SCSI Interface Kit, the UP-5500 can be used as a color printer for digital computer images, and can convert analog video images into digital form for viewing and editing on your computer.

Analog mode (NTSC, PAL)
When using the UP-5500 to handle analog color video images, the video mode standard limits the image resolution and vertical and horizontal image size. These images can be transferred from the printer's memory to the computer, but they are subject to the limitations of the analog video standard. (See "About Image Aspect Ratios" on page 138 for details.)

High Definition (HD) mode
High resolution video images, such as the Hi-Vision standard, can be handled using a special high-resolution digitizer, with image size of 1911 x 1235 pixels.

Digital mode
Computer generated color digital images, such as those created or edited on the computer, can be printed in this mode.

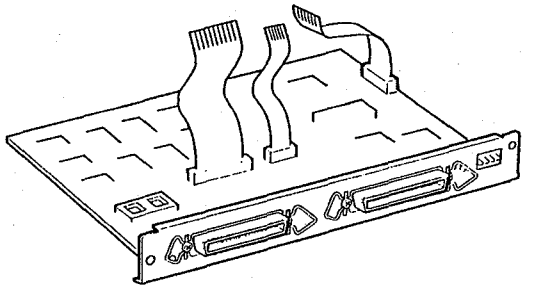
> **Note:**
> When switched on, the UP-5500 is initially in analog mode video (NTSC or PAL standard). To use the digital mode, the printer's video mode must first be switched using the supplied Export software module.

This section is extracted from instruction manual.

1-3. KIT CONTENTS

Please confirm that your Kit contains all of the following items:

- Interface Board (1)



- Installation screws (4)
- Bus terminator (1)
- 2 DD floppy disk (Windows software) (1)
- 2 HD floppy-disk (Macintosh software) (1)
- Floppy-disk folder (1)
- Interface Board installation sheet (1)
- Instructions for Use (this book) (1)
- User registration card (1)
- Software license agreement (1)
- Warranty Card (1)

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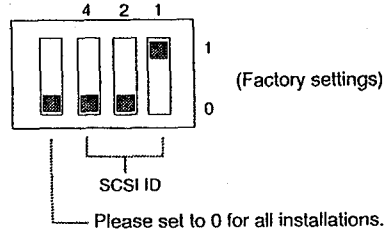
1-4. INSTALLING THE INTERFACE BOARD

Installation instructions for the SCSI Interface Board are provided separately. Contact your supplier if you need assistance.

1-5. SETTING THE DIP SWITCHES

The SCSI ID must be set with SCSI ID DIP switches on the Interface Board. As shipped from the factory, the DIP switches are set as follows:



SCSI ID Setting

The SCSI ID selection must be different from any other device on the bus. If two SCSI devices have the same ID, a malfunction will occur.

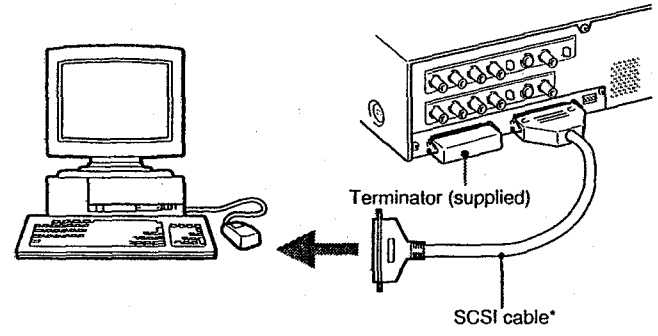
SCSI ID	SCSI ID Switch		
	4	2	1
0	0	0	0
1	0	0	1
2	0	2	0
3	0	2	1
4	4	0	0
5	4	0	1
6	4	2	0
7	4	2	1

(☐ factory settings)

1-6. CONNECTING THE COMPUTER

The UP-5500 connects to your computer's SCSI peripheral interface bus.

Note:
- The Interface Board does not include an internal bus terminator, so if it is the last device (at the end) of the SCSI bus, connect the supplied terminator to the unused SCSI connector.
- Before connecting the SCSI cable, make sure to turn off the power switches on your computer and any peripheral equipment.
- Grasp the connector at the end of the SCSI cable, and firmly insert it into the socket.
- The total length of the SCSI cabling used with a single-host computer should be less than 6 meters.



*** Note:**
SCSI cable connection requirements can vary between different computers and peripherals. Contact your supplier if you need to obtain cables to match your equipment.

Switching on the Power

You should switch on all peripheral devices before turning on your host computer. Particularly, make sure that all SCSI peripherals are switched on first.

1-7. SYSTEM ENVIRONMENT

The Photoshop plug-in module requires a Macintosh equipped as follows:

- Adobe Photoshop version 2.5 or above.
- At least 2 Mbytes free space on hard drive.

1-8. INSTALLING THE PLUG-IN MODULE

This procedure describes installation of the plug-in module for the Macintosh.

1 Insert the supplied floppy disk labeled "Printer Plug-In Module for Macintosh" into the floppy disk drive of the Macintosh.

2 Double click the disk icon to open the drive window.

3 Double click the Japanese folder if you are using Japanese, or the English folder if you are using English.

4 Copy the two module files from the selected folder by dragging their icons to the Photoshop Plug-in folder.

> **Note:**
> To activate the plug-in modules, you must restart Photoshop after installation.

1-9. PRINTING AN IMAGE

When you print an image, the image file must be opened in Photoshop before opening the main dialog box of the Sony UP-5500 Export plug-in module.

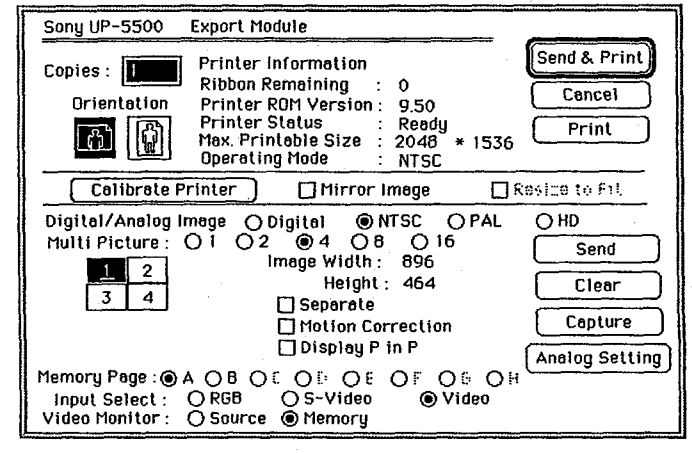
Displaying the Main Dialig Box

To print an image, display the main dialog box with the following procedure.

1 Double click the Photoshop icon to start Photoshop.

2 Open the image file that you want to print. The printer software supports 3-channel RGB and 1-channel grayscale.

3 Choose "Export" in the File pull-down menu, then choose "Sony UP-5500 Export...".
The main dialog box for the Sony UP-5500 appears.



Note:
If the printer is off or the SCSI cable disconnected, the following message is displayed:

The UP-5500 is not responding.
Please check the following:
1. Are the SCSI cables connected?
2. Is the UP-5500 power on?"

Please confirm that the printer is switched on and the cable is connected.

To Print
Make your desired selections in the dialog box, and click "Send & Print"
The controls in the main dialog box are described below.

Main Dialog Box Items

The main dialog box lets you set up your image data and printer conditions, and stop the printer.

- **Copies**
  Select the number of copies you want to print. A maximum of 9 copies can be printed at once.

- **Orientation**
  Select whether your pages should print in Portrait (tall, the default) or Landscape (wide) format.

- **Printer Information**
  Information on the current state of the printer is displayed, as follows:

Ribbon Remaining:	the amount of printer ribbon available for printing
Printer ROM Version:	the firmware version of the printer
Printer Status:	when Ready, you can print. Otherwise, an error message appears.
Max. Printable Size:	The largest possible printing size (in pixels)
Operating Mode:	Current mode, analog or digital

- **Send & Print**
  Click here when you are ready to print, or download the image to the printer. The Printer Status dialog box appears (page 98).

- **Cancel**
  Click here to cancel the print operation and close the dialog box. This invalidates any changes made.

- **Reprint**
  Click here to print image data that is stored in the UP-5500 memory. This button is only active after you have sent an image to the printer's memory.

- **Calibrate Printer**
  Click this button to bring up the Calibrate Printer dialog, to adjust the way the printer handles color, contrast and sharpness properties of the image. See "Calibrate Printer Dialog" on page 95.

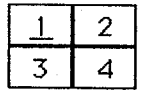
- **Mirror Image**
  To print a mirror image (left-right reversed), check here.

- **Resize to Fit**
  Check here to have the UP-5500 print the image at the maximum possible size. Minimum possible magnification is a factor of 10, vertically and horizontally.

- **Digital/Analog Image**
  Switches the resolution of the image mode. Only NTSC and PAL modes are affected. Both vertical and horizontal resolution is changed.

- **Multi Picture**
  Select the multi picture (thumbnail) mode in the same way as the Multi Picture button on the UP-5500. The resulting frame arrangement is indicated by the boxes at the lower left side of the dialog.

- **Screen selection panel**



This panel shows the layout of the printer memory for multi picture operation. Black boxes represent frames of printer memory that are holding image data. The numbers indicate frames of multi picture memory. The currently selected box is indicated by an underline beneath the box number. You can change this selection by clicking on another box.

- **Image Width/Height**
  In digital mode, the size of the current image is displayed here, in pixels. In other modes, the maximum size of an image that can be transferred is shown.

- **Separate**
  Check this box to print white borders around images printed in the multipicture mode.

- **Motion Correction**
  Check this box to remove blurring in images stored in the printer memory. This works the same way as the MOTION CORRECT button on the UP-5500.

- **Display P in P (picture in picture)**
  Check this box to display source video as a small picture inside the monitor image. This function is the same as the DISPLAY P IN P button on the UP-5500.

- **Memory Page**
  Here you can switch the printer memory page, in the same way as the MEMORY PAGE button on the UP-5500.

- **Input Select**
  Select an input signal source, in the same way as the INPUT SELECT button on the UP-5500.

- **Video Monitor**
  Select the image to be displayed on the printer's video monitor: either the image in printer memory, or an input signal source. This works the same as the SOURCE/MEMORY button on the UP-5500.

- **Send**
  Click here to send an image from the computer to UP-5500 memory.

- **Clear**
  Click this button to delete analog image data from UP-5500 memory. This works the same as the CLEAR button on the UP-5500. This button is displayed only after an image has been stored in the UP-5500 memory.

- **Capture**
  Click this button to capture an analog signal into the memory of the UP-5500. This works the same as the CAPTURE button on the UP-5500.

- **Analog Setting**
  Click this button to display a dialog box for setting up the analog system of the printer. Details are explained under "Analog Settings" on page 97.

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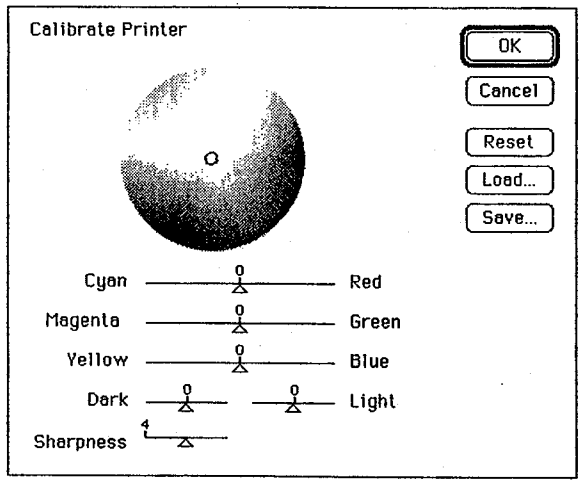
Calibrate Printer Dialog

Clicking the Calibrate Printer button in the main dialog box brings up this dialog.



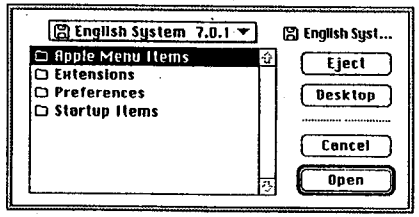
Color rendition can be adjusted in two ways in this dialog box: by dragging the small circle cursor inside the large circle, or by dragging the sliders below. The two methods are linked, so that the small circle and sliders move together.
Sharpness, dark and light must be adjusted by dragging the sliders.
The function of each control in the Calibrate Printer dialog box is described below.

- **OK**
  Click this button to accept any changes, send them to the printer, and close the dialog box. Settings are memorized until changed again later.

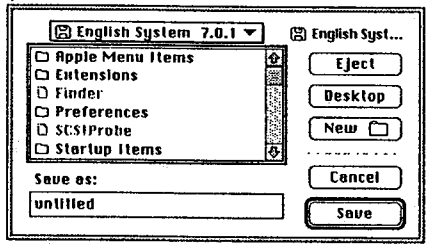
- **Cancel**
  Click this button to return to the main dialog box without saving any changes.

- **Reset**
  Click this button to return all settings to zero. Changes are not saved until you click OK.

- **Load**
  Displays a dialog box to allow you to load a set of calibration parameters that has been previously saved to a file on disk. Select the desired file.

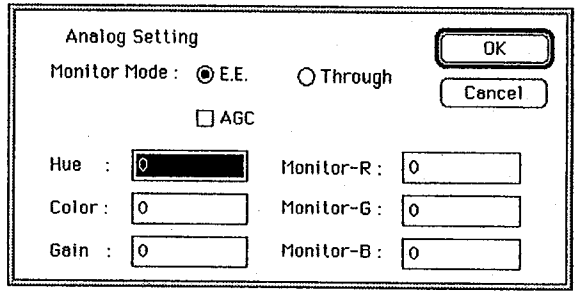


- **Save**
  Displays a dialog box to allow you to save the current set of calibration parameters to a disk file. Enter a file name.



Analog Setting Dialog Box

Clicking the Analog Setting button in the main dialog box brings up this dialog.



Here you can adjust the analog settings of the printer.
The function of each control in this dialog follows.

- **Monitor Mode**
  Select the monitor mode from the following:
  E.E.: Displays on the monitor the output of an A/D or D/A conversion of an image in the printer.
  Through: Displays the input signal as is. No menu is displayed on the monitor.

- **AGC**
  Check this box to enable automatic gain control, to limit signal level fluctuation and overloading.

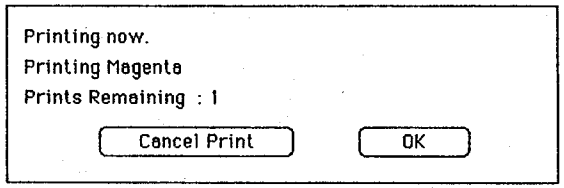
- **Hue/Color/Gain/Monitor - R/Monitor - G/Monitor - B**
  These boxes accept numerical adjustments to the six parameters, to optimize color rendition on the monitor. Adjustments from -7 to +7 can be entered. However, the Hue cannot be adjusted in PAL mode.

- **OK**
  Click this button to accept any changes, send them to the printer, and close the dialog box. Settings are memorized until changed again later.

- **Cancel**
  Click this button to return to the main dialog box without saving any changes.

Printer Status Dialog

This dialog box appears whenever printing starts, and when you try to open the main dialog box during printing.



- **Status Display**
  The printer status is displayed as follows:
  Printing: indicates the color that is currently printing.
  Prints Remaining: indicates the number of copies yet to be printed.

- **Cancel Print**
  Click this button to stop the print job.

- **OK**
  Click this button to close the dialog box and continue printing.

1-10. ACQUIRING IMAGE DATA

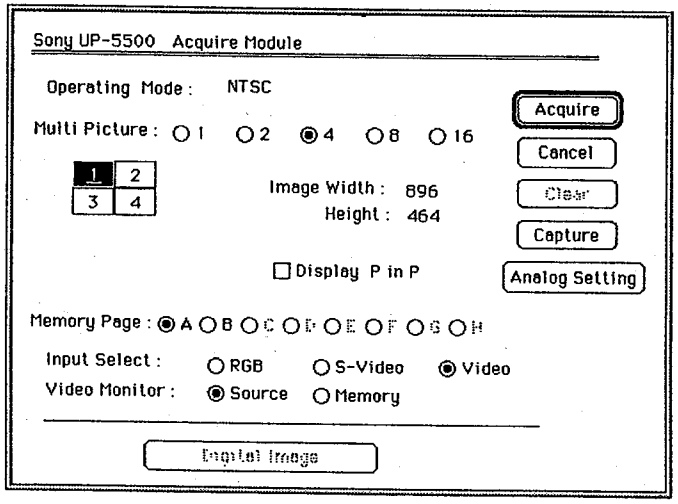
When the printer acquires image data in memory for use by Photoshop, the Sony UP-5500 Acquire Module's main dialog box appears.

Displaying the Main Dialog Box

You can display the main dialog box for the Acquire module with the following procedure.

1 Double click the Photoshop icon to start Photoshop.

2 Choose "Aquire" in the File pull-down menu, then choose Sony UP-5500 Acquire...".
The main dialog box for the Sony UP-5500 Acquire module is displayed.



Note:
If the printer is off or the SCSI cable disconnected, the following message is displayed:
"The UP-5500 is not responding.
Please check the following:
1. Are the SCSI cables connected?
2. Is the UP-5500 power on?"
Please confirm that the printer is switched on and the cable is connected.

To Acquire the Image Data
Make your desired selections in the dialog box, and then click the Acquire button. Each of the controls in the dialog box is described below.

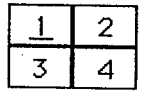
Main Dialog Items

The controls in this dialog box allow you to confirm and set the state of the image and printer before importing image data, and to stop the printer.

- **Operating Mode**
  Displays the current video mode.

- **Multi Picture**
  Selects the multi picture mode (thumbnail) in the same way as the MULTI PICTURE button on the UP-5500. The resulting frame arrangement is indicated by the boxes at the left side of the dialog.

- **Screen selection panel**



  This panel shows the layout of the printer memory for multi picture operation. The numbers indicate frames of multi picture memory. The currently selected box is indicated by an underline beneath the box number. You can change this selection by clicking on another box.

- **Image Width/Height**
  The size of the current image in printer memory is displayed here, in pixels.

- **Display P in P (picture in picture)**
  Check this box to display source video as a small picture inside the monitor image. This function is the same as the DISPLAY P IN P button on the UP-5500.

- **Acquire**
  Import the image data from the UP-5500 to Photoshop.

- **Cancel**
  Click here to close the dialog box.

- **Clear**
  Click this button to delete analog image data from UP-5500 memory. This works the same as the CLEAR button on the UP-5500. This button is displayed only after an image has been stored in the UP-5500 memory.

- **Capture**
  Click this button to capture an analog signal into the memory of the UP-5500. This works the same as the CAPTURE button on the UP-5500.

- **Analog Setting**
  Click this button to display a dialog box for setting up the analog system of the printer. Details are explained under "Analog Setting Dialog Box" on page 97.

- **Memory Page**
  Here you can switch the printer memory page, in the same way as the MEMORY PAGE button on the UP-5500.

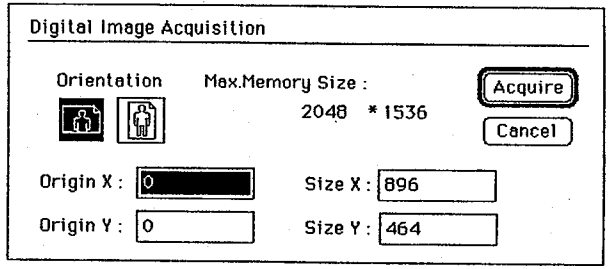
- **Input Select**
  Select an input signal source, in the same way as the INPUT SELECT button on the UP-5500.

- **Video Monitor**
  Select the image to be displayed on the printer's video monitor: either the image in printer memory, or an input signal source. This works the same as the SOURCE/MEMORY button on the UP-5500.

- **Digital Image**
  Click this button to display the Digital Image dialog box for setting up the digital mode of the printer. Details are explained next.

Digital Image Setup

This dialog box appears when the Digital Image button is pressed on the Acquire Module main dialog.



The function of each control follows:

- **Acquire**
  Click here to import the image data from the UP-5500. When finished importing, this dialog and the main dialog box will both close.

- **Cancel**
  Click here to close this dialog and return to the main dialog box, ignoring any changes.

- **Orientation**
  These icons indicate the orientation of the image in the memory of the UP-5500, either Portrait or Landscape. The orientation cannot be changed once the image has been stored.

- **Origin and Size**
  The position and size of the last imported image are displayed. You can enter new position and size coordinates as needed.
  Origin X, Origin Y: coordinates of the starting point.
  Size X, Size Y: size of the image, in pixels.

1-11. SYSTEM ENVIRONMENT

Required Hardware

- A computer with Photoshop for Windows installed.
- At least 2 Mbytes of free space on the hard drive.
- A SCSI Host Adapter*
- Sony UP-5500 Printer

* The following SCSI host adapters have been determined to be compatible (as of September 1994)

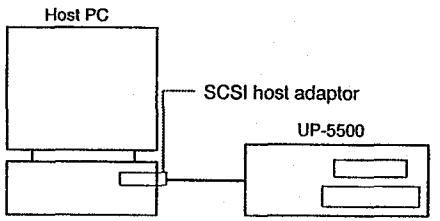
For IBM compatibles: Adaptec models AHA-1542CF, AHA-1522A and AHA-2742T

Please refer to the README file for additional SCSI compatibility issues. For details of SCSI host adapter installation with your host computer, please refer to your SCSI host adapter documentation.

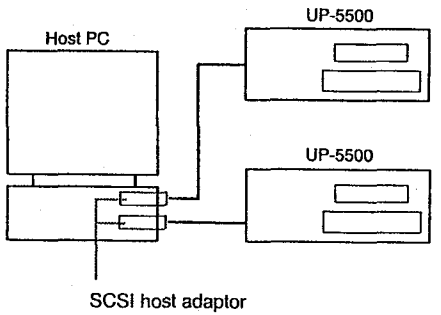
Supported SCSI Configuration

The supplied software assumes that the printer is connected to a SCSI bus with a single host adaptor. The software may not function properly on a system in which multiple printers are connected through two or more host adaptors.

Supported Configuration



Non-Supported Configurations



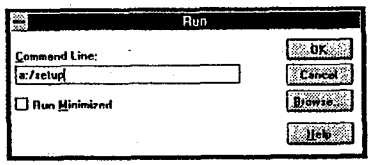
1-12. INSTALLING THE PLUG-IN MODULE

This procedure describes installation of the Photoshop plug-in module for Windows.

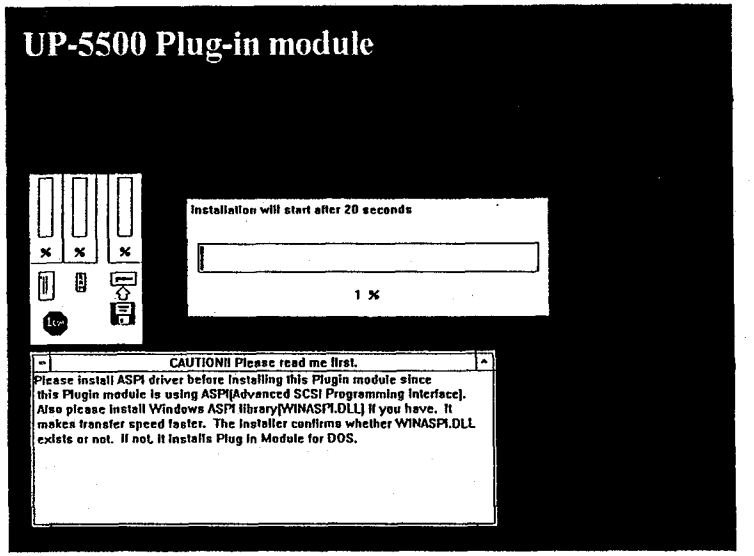
1 Turn on the computer and start Windows.

2 Insert the supplied floppy disk labeled "Plug-In Module for Windows" into the floppy disk drive of the computer. The following steps assume that the disk is in drive A. If you have the disk in a different drive (e.g., B), please substitute that letter as appropriate.

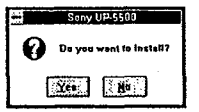
3 In the Windows Program Manager, select "Run..." from the File drop-down menu to display the Run dialog box.



4 Type "A:SETUP" in the text box, and click OK. Installation begins, and the next window is displayed.

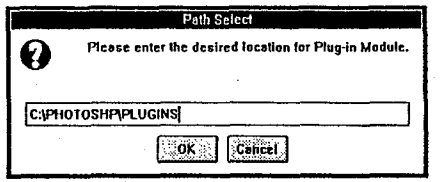


After about 20 seconds, the following dialog box appears:

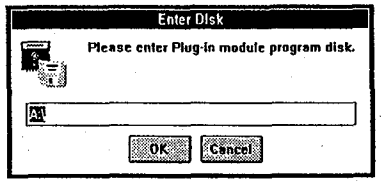


> **Note:**
> Setup can also be run from the Windows File Manager.

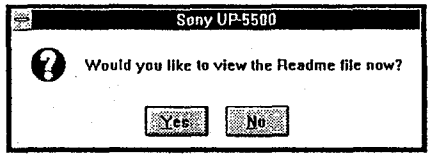
5 Choose Yes, and you are asked for a directory in which to install the Photoshop Plug-In Module software.



6 Type the desired directory, and the next window is displayed.



7 Choose OK. Installation proceeds until the next message is displayed, as installation ends.



8 Choose Yes to view the README file. When finished, a new program group, "SONY UP-5500", is displayed in the Program Manager.

After install finishes, restart Windows to use the plug-in module.

The Sony UP-5500 Export main dialog box of the plug-in module appears when you print an image from within Photoshop.

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Displaying the Main Dialog Box

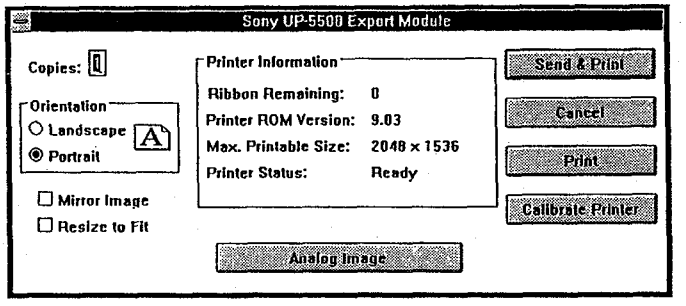
When you have an image ready to print, use the following procedure to display the main dialog box.

To print Photoshop images, use the following procedure:

1 Double click the Photoshop icon to start the Photoshop application.

2 Open the image file that you want to print. (This software supports 3-channel RGB, and 1-channel grayscale.)

3 Choose "Export" from the File menu. If your SCSI host adapter supports only DOS ASPI, choose "Sony UP-5500 Export (DOS)...". If your host adapter supports Windows ASPI, choose "Sony UP-5500 Export...". The main dialog box for the Sony UP-5500 Export appears.



Note:
If the printer is off or the SCSI cable disconnected, the following message is displayed:
"The UP-5500 is not responding"
Please confirm that the printer is switched on and the cable is connected.

To Print
Make your desired selections in the dialog box, and click "Send & Print"
The selections in the main dialog box are described below.

Main Dialog Box Items

The main dialog box lets you set up your image data and printer conditions, and stop the printer.

- **Copies**
  Select the number of copies you want to print. A maximum of 9 copies can be printed at once.

- **Orientation**
  Select whether your pages should print in Portrait (tall, the default) or Landscape (wide) format.

- **Mirror Image**
  To print a mirror image (left-right reversed), check here.

- **Resize to Fit**
  Check here to have the UP-5500 print the image at the maximum possible size. Minimum possible magnification is a factor of 10, vertically and horizontally.

- **Printer Information**
  Information on the current state of the printer is displayed.

- **Send & Print**
  Click here when you are ready to download the image to the printer. The UP-5500 is activated in the digital mode, and the Printer Status dialog box appears. For details, see "Printer Status Display" (page 120).

- **Cancel**
  Click here to cancel the print operation and close the dialog box.

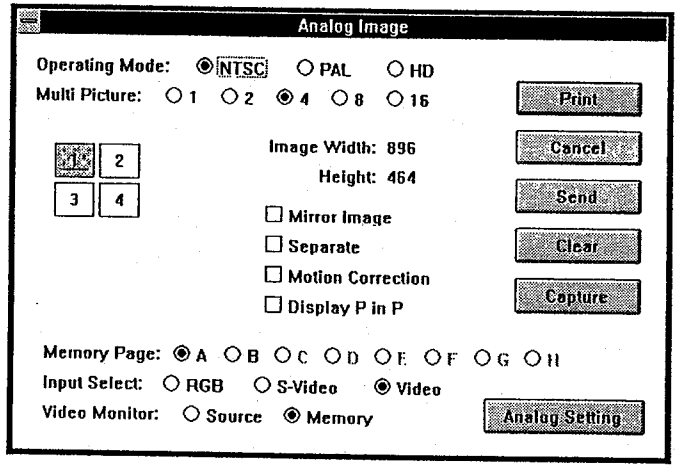
- **Print**
  Click here to print image data that is stored in the UP-5500 memory. This button is only active after you have sent an image to the printer's memory.

- **Calibrate Printer**
  Click this button to bring up the Calibrate Printer dialog, to adjust the way the printer handles color, contrast and sharpness properties of the image. See "Calibrate Print Dialog" on page 117.

- **Analog Image**
  Click this button to display a dialog box for setting up the analog image parameters of the printer. Details are explained below.

Analog Image Dialog Box Functions

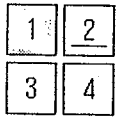
Clicking on the Analog Image button in the UP-5500 Export main dialog box brings up the Analog Image dialog box.



- **Operating Mode**
  Select the video mode of the data to be printed: NTSC, PAL or HD.

- **Multi Picture**
  Select the multipicture(thumbnail) mode in the same way as the MULTI PICTURE button on the UP-5500. The resulting frame arrangement is indicated by the boxes at the left side of the dialog.

- **Screen selection panel**



This panel shows the available frames of the printer memory for multi picture operation. Grayed boxes represent those portions of printer memory that are holding image data. The currently selected box is indicated by an underline beneath the box number. You can change this selection by clicking on another box.

- **Image Width/Height**
  These numbers indicate the size of the image data that can be acquired in the current video mode, in pixels.

- **Mirror Image**
  To print a mirror image (left-right reversed), check here.

- **Separate**
  Check this box print white borders around images printed in the multi picture mode.

- **Motion Correction**
  Check this box to remove blurring in images stored in the printer memory. This works the same way as the MOTION CORRECT button on the UP-5500.

- **Display P in P (picture in picture)**
  Check this box to display source video as a small picture inside the monitor image. This function is the same as the DISPLAY P IN P button on the UP-5500.

- **Memory Page**
  Here you can switch the printer memory page, in the same way as the MEMORY PAGE button on the UP-5500.

- **Input Select**
  Select an input signal source, in the same way as the INPUT SELECT button on the UP-5500.

- **Video Monitor**
  Select the image to be displayed on the printer's video monitor: either the image in printer memory, or an input signal source. This works the same as the SOURCE/MEMORY button on the UP-5500.

- **Print Button**
  Print the image that is stored in the UP-5500 memory.

- **Cancel**
  Click this button to return to the main dialog box.

- **Send**
  Click here to send an image to the printer's memory.

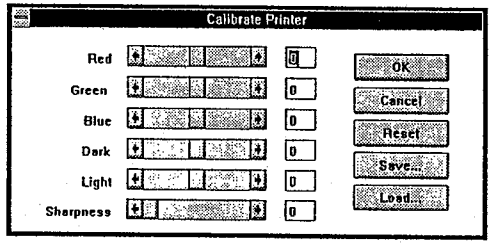
- **Clear**
  Click this button to delete analog image data from UP-5500 memory. This works the same as the CLEAR button on the UP-5500. This button is displayed only when image data is present in the UP-5500 memory.

- **Capture**
  Click this button to capture an analog signal into the memory of the UP-5500. This works the same as the CAPTURE button on the UP-5500.

- **Analog Setting**
  Click this button to display a dialog box for setting up the analog system of the printer monitor. Details are explained under "Analog Setting Dialog Box" on page 119.

Calibrate Printer Dialog

Clicking the Calibrate Printer button in the main dialog box brings up this dialog.



Adjustments can be made by moving the sliders, or by entering numerical values directly. The dialog shows the same adjustment ranges as are available on the printer. See the printer manual for details.

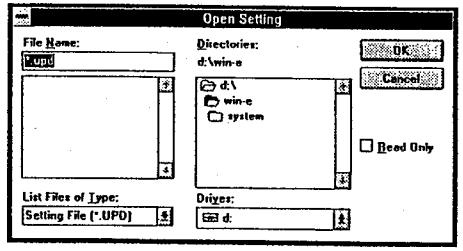
The functions of the other controls in the calibrate print dialog box are described below.

- **OK**
  Click this button to accept any changes, send them to the printer, and close the dialog box. Settings are memorized until changed again later.

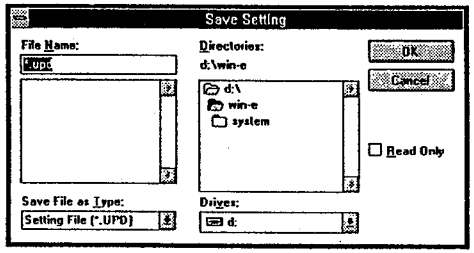
- **Cancel**
  Click this button to return to the main dialog box without saving any changes.

- **Reset**
  Click this button to return all settings to zero. The changes are not saved until you click OK.

- **Load**
  Displays a dialog box to allow you to load a set of calibration parameters that has been previously saved to a file on disk. Select the desired file.

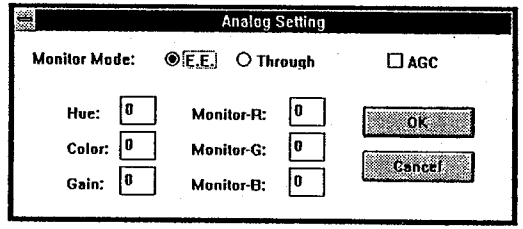


- **Save**
  Displays a dialog box to allow you to save the current set of calibration parameters to a disk file. Enter a file name.



Analog Setting Dialog Box

Clicking the Analog Setting button in the main dialog box brings up this dialog, where you can adjust the analog settings for the printer.



The function of each control in this dialog follows.

- **Monitor Mode**
  Select the monitor mode from the following:
  E.E.: Display on the printer monitor the output of an A/D or D/A conversion of an image in the printer.
  Through: Display the input signal as is. No menu is displayed on the monitor.

- **AGC**
  Check this box to enable automatic gain control, to limit signal level fluctuation and overloading.

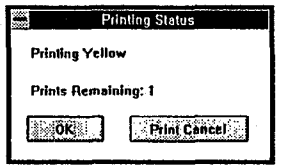
- **Hue/Color/Gain/Monitor - R/Monitor - G/Monitor - B**
  These boxes accept numerical adjustments to the six parameters, to optimize color rendition on the monitor. Adjustments from –7 to +7 can be entered. However, the Hue cannot be adjusted in PAL mode.

- **OK**
  Click this button to accept any changes, send them to the printer, and close the dialog box. Settings are memorized until changed again later.

- **Cancel**
  Click this button to return to the main dialog box without saving any changes.

Printer Status Dialog

This dialog box appears whenever printing starts, and when you try to open the main dialog box during printing.



- **Status Display**
  The printer status is displayed as follows:
  Printing: indicates the color that is currently printing.
  Prints Remaining: indicates the number of copies yet to be printed.

- **OK**
  Click this button to close the dialog box and continue printing.

- **Cancel Printing**
  Click this button to stop the print job.

1-14. ACQUIRING IMAGE DATA

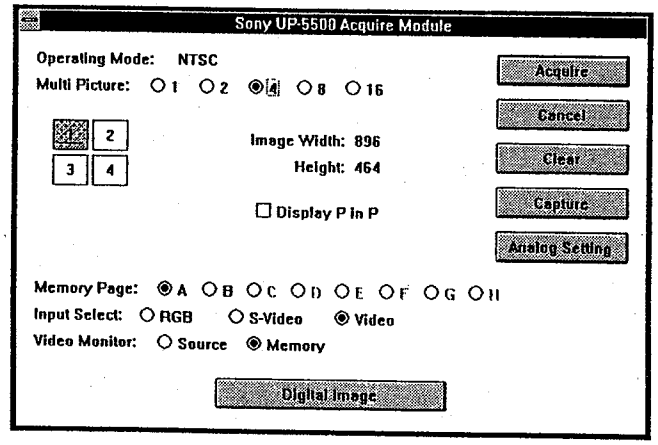
When the printer acquires image data in memory for use by Photoshop, the Sony UP-5500 Acquire Module dialog box appears.

Displaying the Main Dialog Box

You can display the main dialog box for the Acquire module with the following procedure.

1 Double click the Photoshop icon to start Photoshop.

2 Choose "Acquire" in the File pull-down menu, then from the submenu choose "Sony UP-5500 Acquire (DOS)..." if your host adapter supports only DOS ASPI, or choose "Sony UP-5500 Acquire..." if your host adapter supports Windows ASPI.
The main dialog box for the Sony UP-5500 Acquire module is displayed.



Note:
If the printer is off or the SCSI cable disconnected, the following message is displayed:
"The UP-5500 is not responding."
Please confirm that the printer is switched on and the cable is connected.

To Acquire the Image Data
Make your desired selections in the dialog box, and then click the Acquire button. Each of the controls in the Acquire dialog box are described below.

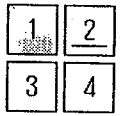
Main Dialog Box Items

The controls in this dialog box allow you to confirm and set the state of the image and printer before importing image data, and to stop the printer.

- **Operating Mode**
  Displays the current video mode.

- **Multi Picture**
  Selects the multi picture (thumbnail) mode in the same way as the MULTI PICTURE button on the UP-5500. The resulting frame arrangement is indicated by the boxes at the left side of the dialog.

- **Screen selection panel**



This panel shows the available frames of the printer memory for multi picture operation. Grayed boxes represent those portions of printer memory that are holding image data. The currently selected box is indicated by an underline beneath the box number. You can change this selection by clicking on another box.

- **Image Width/Height**
  The size of the image frame is displayed here, in pixels.

- **Display P in P (picture in picture)**
  Check this box to display source video as a small picture inside the monitor image. This function is the same as the DISPLAY P IN P button on the UP-5500.

- **Acquire**
  Import the image data from the UP-5500 to Photoshop.

- **Cancel**
  Click here to close the dialog box.

- **Clear**
  Click this button to delete analog image data from UP-5500 memory. This works the same as the CLEAR button on the UP-5500. This button is displayed only after an image has been stored in the UP-5500 memory.

- **Capture**
  Click this button to capture an analog signal into the memory of the UP-5500. This works the same as the CAPTURE button on the UP-5500.

- **Analog Setting**
  Click this button to display a dialog box for setting up the analog circuitry of the printer. Details are explained under "Analog Settings Dialog Box" on page 119.

- **Memory Page**
  Here you can switch the printer memory page, in the same way as the MEMORY PAGE button on the UP-5500.

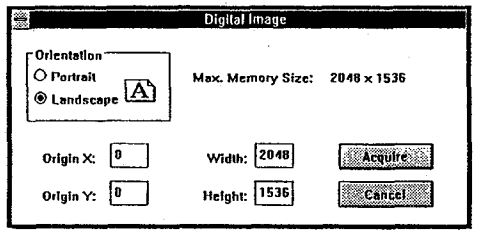
- **Input Select**
  Here you can select an input signal source, in the same way as the INPUT SELECT button on the UP-5500.

- **Video Monitor**
  Here you can select the image to be displayed on the printer's video monitor: either the image in printer memory, or an input signal source. This works the same as the SOURCE/MEMORY button on the UP-5500.

- **Digital Image**
  Click this button to display a dialog box for setting up the digital mode of the printer. Details are explained next. When using an analog operating mode (NTSC, PAL or HD), this button is not available.

Digital Image Setup

This dialog box appears when the Digital Image button is pressed on the Acquire Module main dialog.



The function of each control follows:

- **Orientation**
  These icons indicate the orientation of the image in the memory of the UP-5500, either Portrait or Landscape.

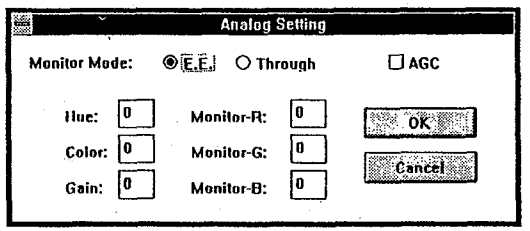
- **Origin, Width and Hight**
  The position and size of the last imported image are displayed. You can enter new position and size coordinates as needed.
  Origin X, Origin Y: coordinates of the starting point.
  Width and Hight: width and height of the image, in pixels.

- **Acquire**
  Click here to import the image data from the UP-5500. When finished importing, this dialog and the main dialog box will both close.

- **Cancel**
  Click here to return to the main dialog box, ignoring any changes.

Analog Setting Dialog Box

Clicking the Analog Setting button in the main dialog box brings up this dialog,



Here you can adjust the analog circuitry of the printer.
The function of each control in this dialog follows.

- **Monitor Mode**
  Select the monitor mode from the following:
  E.E.: Displays on the monitor the output of an A/D or D/A conversion of an image in the printer.
  Through: Displays the input signal as is. No menu is displayed on the monitor.

- **AGC**
  Check this box to enable automatic gain control, to limit signal level fluctuation and overloading.

- **Hue/Color/Gain/Monitor - R/Monitor - G/Monitor - B**
  These boxes accept numerical adjustments to the six parameters, to optimize color rendition on the monitor. Adjustments from –7 to +7 can be entered. However, the Hue cannot be adjusted in PAL mode.

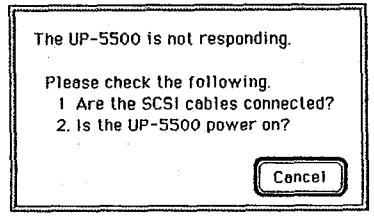
- **OK**
  Click this button to accept any changes, send them to the printer, and close the dialog box. Settings are memorized until changed again later.

- **Cancel**
  Click this button to return to the main dialog box without saving any changes.

1-15. ERROR MESSAGES

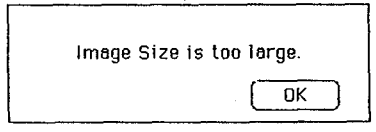
The probable causes of each of the error messages that might appear while running the software are described below, together with suggested remedies.

Macintosh Error Messages



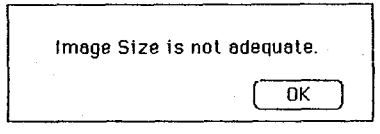
Cause: The Computer and UP-5500 are not connected together, or the UP-5500 is not turned on.

Remedy: Check the cables and power to the printer.



Cause: In Digital mode, the size of the image data being sent or printed exceeds the maximum possible size.

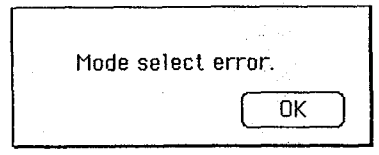
Remedy: Reduce the size of your image data to no more than 2048 x 1536 pixels.



Cause: In an Analog mode, the size of the image data being sent or printed is incorrect.

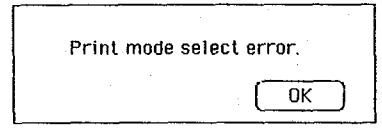
Remedy: For NTSC and PAL mode, this depends on your printer setup. Refer to the Image Width and Image Height in the Export dialog.

For HD: 1911 x 1235 pixels



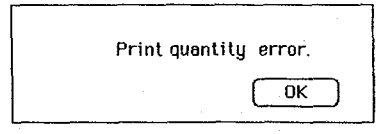
Cause: A fault occurred in data communication between the computer and printer.

Remedy: The printer has an irrecoverable error. Try turning the printer off, and back on.



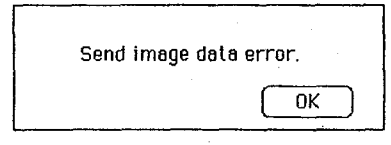
Cause: Data mismatch between the computer and printer.

Remedy: The printer has an irrecoverable error. Try turning the printer off, and back on.



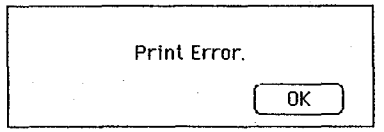
Cause: The specified number of copies to print is out of range.

Remedy: Set for 1 to 9 copies.



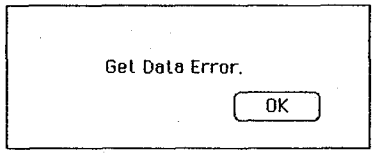
Cause: A data error occurred while transferring the image.

Remedy: Try the operation again.



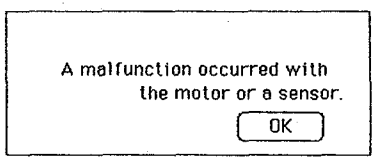
Cause: An error occurred during printing.

Remedy: Try printing the image again.



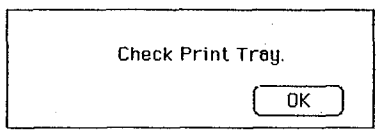
Cause: An error occurred while the printer was acquiring data.

Remedy: Try the operation again.



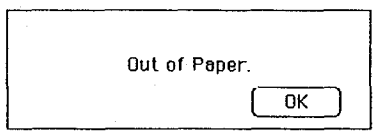
Cause: A malfunction occurred with the motor or a sensor.

Remedy: Contact your supplier or the nearest Sony service station.



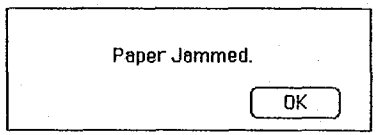
Cause: The paper feeder tray cover is not installed properly.

Remedy: Check the feeder tray cover.



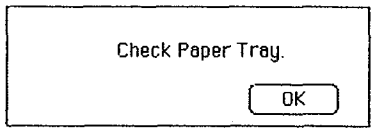
Cause: There is no more paper in the printer.

Remedy: Reload the paper tray.



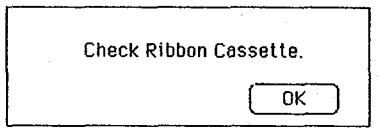
Cause: Paper is stuck inside the printer.

Remedy: Refer to the UP-5500 manual to remove the stuck paper.



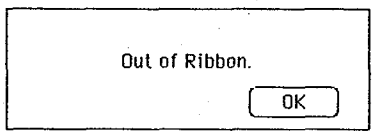
Cause: The paper tray is not installed properly.

Remedy: Reinstall the paper tray.



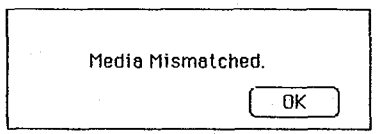
Cause: The ink ribbon cassette is not installed.

Remedy: Install an ink ribbon cassette.



Cause: The ink ribbon has been used up.

Remedy: Replace the ink ribbon cassette.

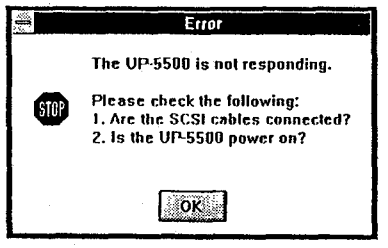


Cause: The ink ribbon is incompatible with the printing paper.

Remedy: Change either the ribbon or the paper.

Windows Error Messages

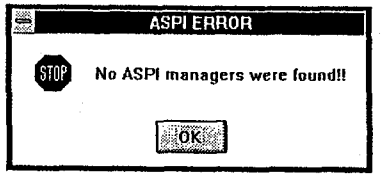
Error Dialog Box



Cause: The Computer and UP-5500 are not connected together, or the UP-5500 is not turned on.

Remedy: Check the cables and power to the printer.

ASPI ERROR Dialog Box



Cause: The DOS ASPI manager is not loaded in the computer's memory.

Remedy: Check your ASPI manager installation, and reinstall if necessary.

In addition to the above, the following error messages can occur in the ASPI ERROR dialog box.

"This ASPI manager doesn't support the current Windows mode"

Cause: Windows is running in Real mode.

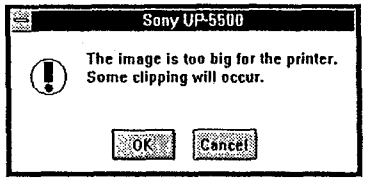
Remedy: Restart Windows in Enhanced mode.

"ASPI manager for Windows cannot initialize."

Cause: There may be insufficient system resources available.

Remedy: Try closing unnecessary applications to free up resources.

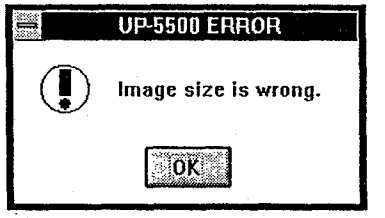
Sony UP-5500 Dialog Box



Cause: In Digital mode, the size of the image data being sent or printed exceeds the maximum possible size.

Remedy: Click OK to print the clipped image, or choose Cancel and reduce the size of your image.

UP-5500 ERROR Dialog Box



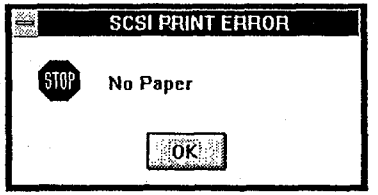
Cause: In an Analog mode, the size of the image data being sent or printed is incorrect.

Remedy: For NTSC and PAL mode, this depends on your printer setup. Refer to the Image Width and Image Height in the Export dialog.

For HD: 1911 x 1235 pixels

■ SCSI PRINT ERROR Dialog Box

The SCSI print error dialog box is displayed if a SCSI command error occurs. The command name that caused the error is displayed in the title bar. For example, the following dialog box could be displayed:



The following messages can be displayed in the message box:

No Ink Ribbon
Cause: The ink ribbon is used up.
Remedy: Replace the ink ribbon cassette.

Similar messages and remedies apply for the feeder tray and cover, ink ribbon cassette and printing paper.
To correct any of these problems, reinstall or replace the indicated item.

Paper Jam
Cause: Paper is stuck inside the printer.
Remedy: Refer to the UP-5500 manual to remove the stuck paper.

No paper
Cause: There is no more paper in the printer.
Remedy: Reload the paper tray.

SCSI Parity error
Cause: The SCSI cable may be too long, or improperly connected.
Remedy: Check and correct the cable problem.

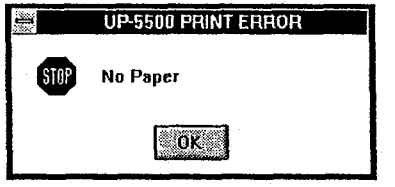
Power Supply Off, or Bus Reset
Cause: the printer may be off, or the SCSI board could be hung up.
Remedy: Try switching both the computer and printer off and back on.

If any of the following messages appear, contact your supplier or your nearest Sony service center.

- No sense data
- Sense data not defined
- Initiator detected error message received
- Printer keeps running
- Data is not being transferred
- Printing (hangs up)
- Motor or sensor trouble
- Logic unit is not supported
- Bad bit used in identify message
- Unrecognized operation code
- An out-of-bounds CDB was employed
- Parameter list out of bounds
- Printing command mismatch
- Command mismatch
- Canceled by STOP button
- Infinite Command loop

■ Printing Errors

The following message box appears if an error occurs during printing.



The following messages can appear in the message box.

Motor or sensor malfunction
Cause: The printer motor or one of the sensors has malfunctioned.
Remedy: Contact your supplier or the nearest Sony service station.

Feeder Tray
Cause: The paper feeder tray is not installed properly.
Remedy: Check the feeder tray.

Feeder Tray Cover
Cause: The feeder tray cover is not set properly.
Remedy: Reset the feeder tray cover, and try again.

Ink Ribbon Cassette
Cause: The ink ribbon cassette is not installed properly
Remedy: Reinstall the cassette.

No Paper
Cause: There is no more paper in the printer.
Remedy: Reload the paper tray.

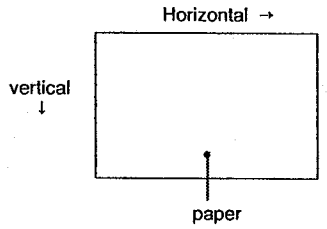
Paper Jam
Cause: Paper is stuck inside the printer.
Remedy: Refer to the UP-5500 manual to remove the stuck paper.

Media Mismatch
Cause: The ink ribbon is incompatible with the printing paper.
Remedy: Change either the ribbon or the paper.

About Image Aspect Ratios

When you switch the Digital/Analog mode of an image, the printing aspect ratio of the image changes. The ratio of vertical to horizontal resolution in each mode is related as described below.

Mode	Resolution Ratio (horiz : vert)
Digital	1 : 1
NTSC	1 : 0.6748
PAL	1 : 0.8331
HD	1 : 1.153

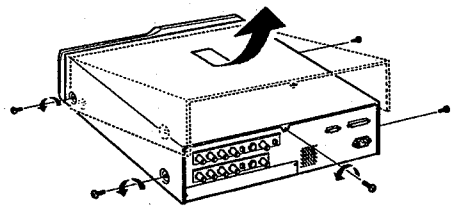


Any image imported in NTSC or PAL video mode from the printer will conform to the resolution ratios indicated above. If you want to include such an image in digital mode for printout, first edit the image in Photoshop to correct for the difference in resolution ratios.
For example, if you import a 896 x 464 image in NTSC mode, you will need to convert the vertical resolution to maintain the same aspect ratio in a digital image. Referring to the Resolution Ratios above, divide the vertical dimension by the resolution ratio: 464/0.6747 = 687.6, and round the result up. So you would use Photoshop to stretch the image vertically to 688 pixels, resulting in a converted image size of 896 x 688.
Of course, if you are going to export the image for printing in the same video mode, it is not necessary to change the resolution ratio of the imported image.

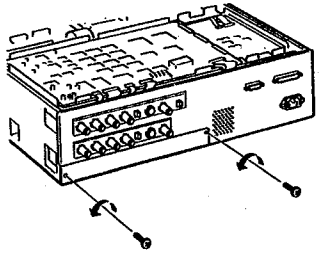
Installing the Interface Board in the UP-5500.

Caution:
Turn off the UP-5500 and disconnect the power cord when installing the Interface Board.

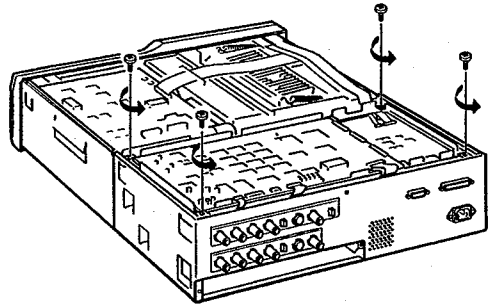
1 Remove the 5 screws shown in the figure, and remove the cover by lifting it at the rear end and pulling it in the directrion shown by the arrow.



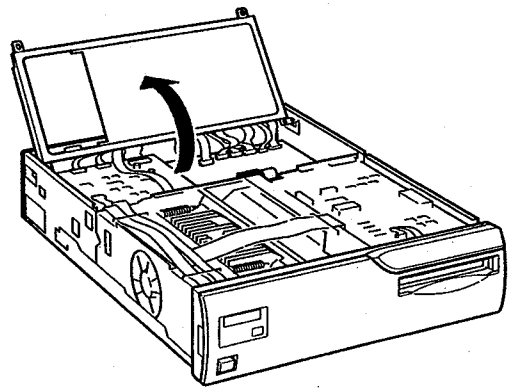
2 Remove the screws from both sides of one of the expansion slot covers, and remove the slot cover.



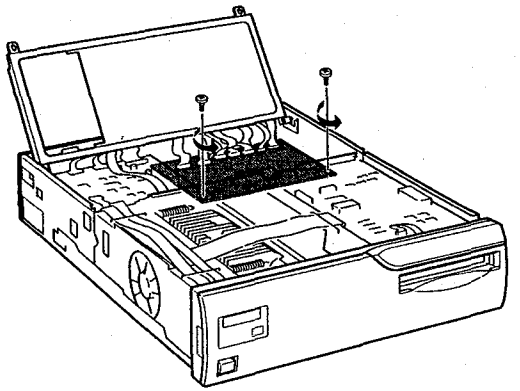
3 Remove the four retaining screws from the uppermost circuit board located closest to the rear panel.



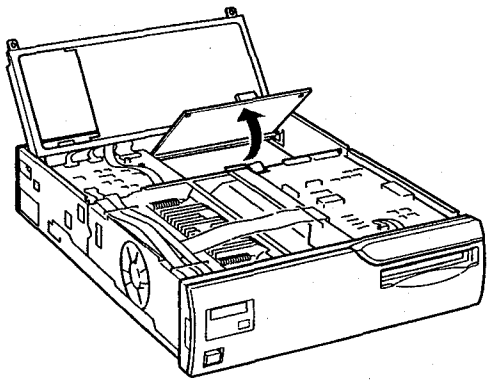
4 Stand the circuit board upright in its holder.



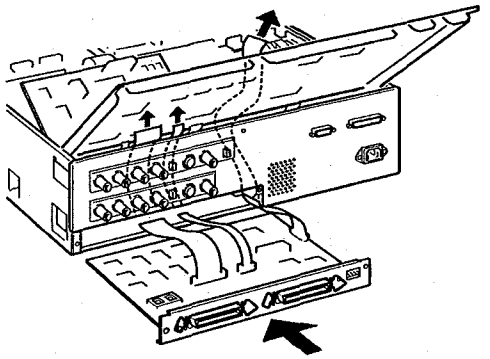
5 Remove the two retaining screws from the middle circuit board.



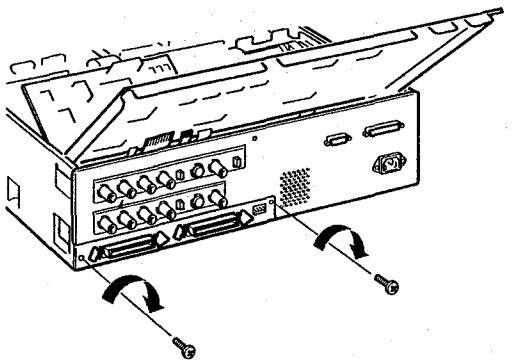
6 Stand the middle circuit board upright in its holder.



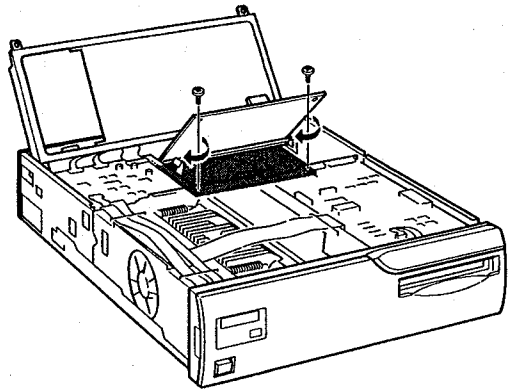
7 Insert the Interface Board firmly into the expansion slot, while making sure that the two rear cable harnesses are routed between the rear panel and the uppermost circuit board.



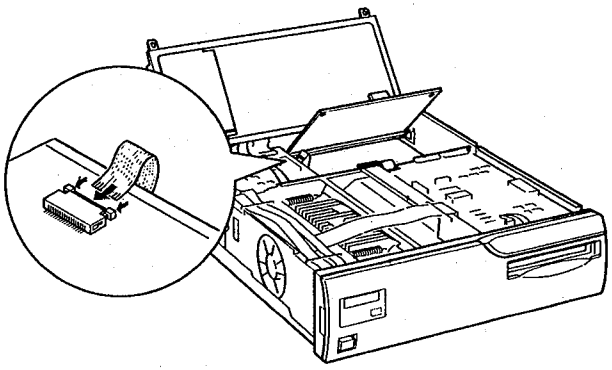
8 Fasten the panel of the Interface Board with the supplied screws.



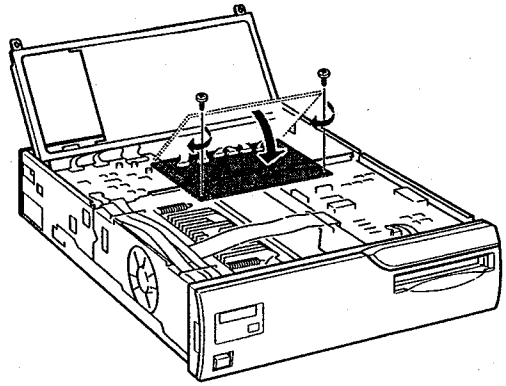
9 Fasten the Interface Board with the supplied screws.



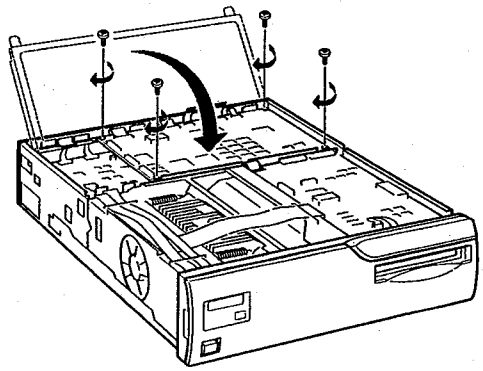
10 Connect the side cable harness of the Interface Board to the connector shown in the illustration.



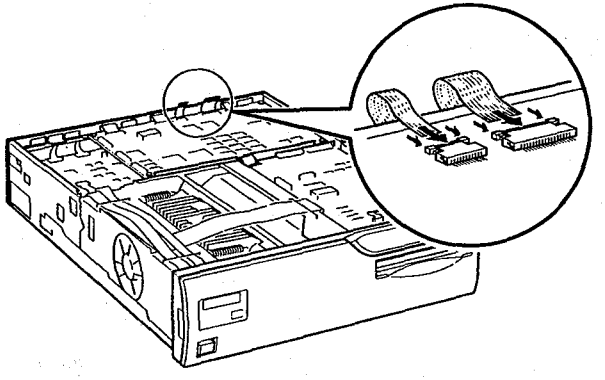
11 Restore the middle circuit board to its original position and fasten it with its two screws.



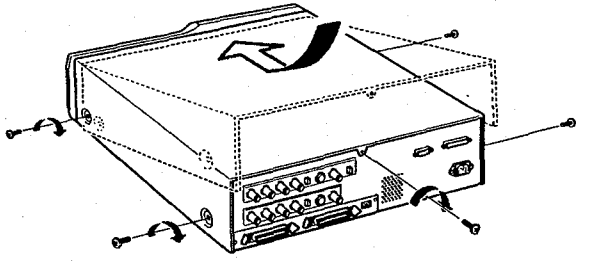
12 Restore the uppermost circuit board to its original position and fasten it with its four screws.



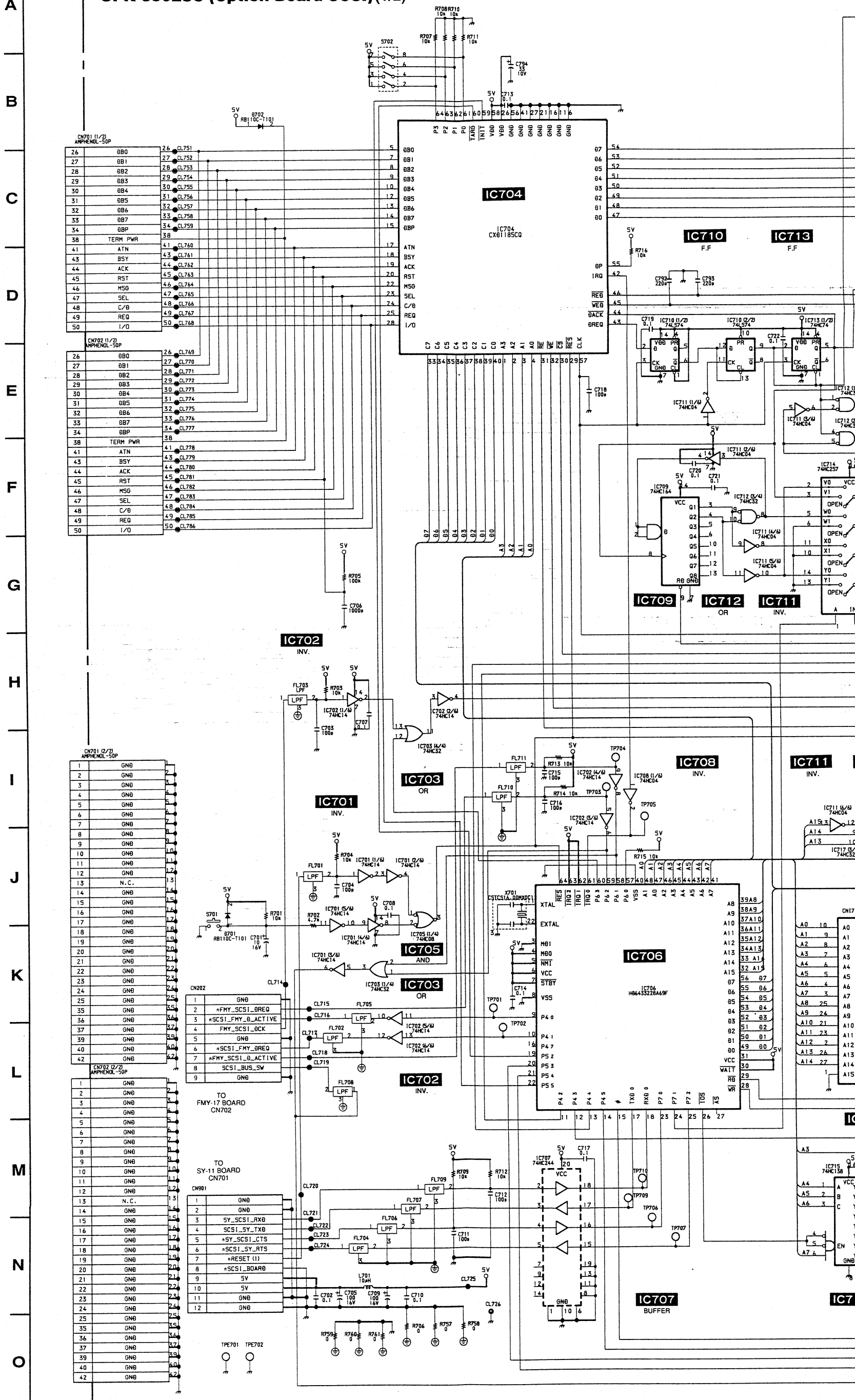
13 Connect the two rear cable harnesses to their matching connectors on the topmost circuit board.



14 Restore the cover to its original position.



UPK-5502SC (Option Board SCSI) (1/2)



IC721
IC721
CX086690

IC710
F.F

IC713
F.F

IC718
SWITCH

IC714
SWITCH

IC712
OR

IC709
IC712
OR
IC711
INV.

IC717
OR

IC720
SWITCH

IC723
IC724
IC725

IC726
IC727
IC728

IC708
INV.

IC711
INV.

IC717
OR

IC713
F.F

IC706

IC716

IC719

IC707
BUFFER

IC715

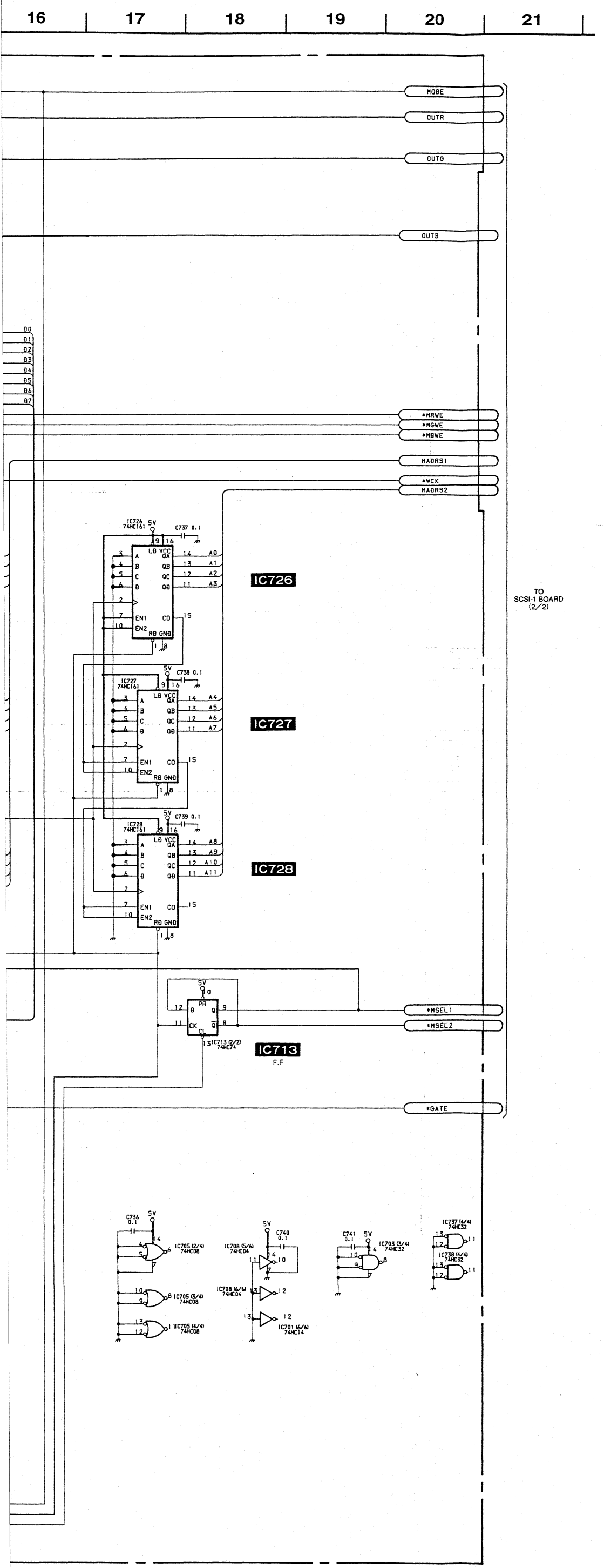
IC708
INV.

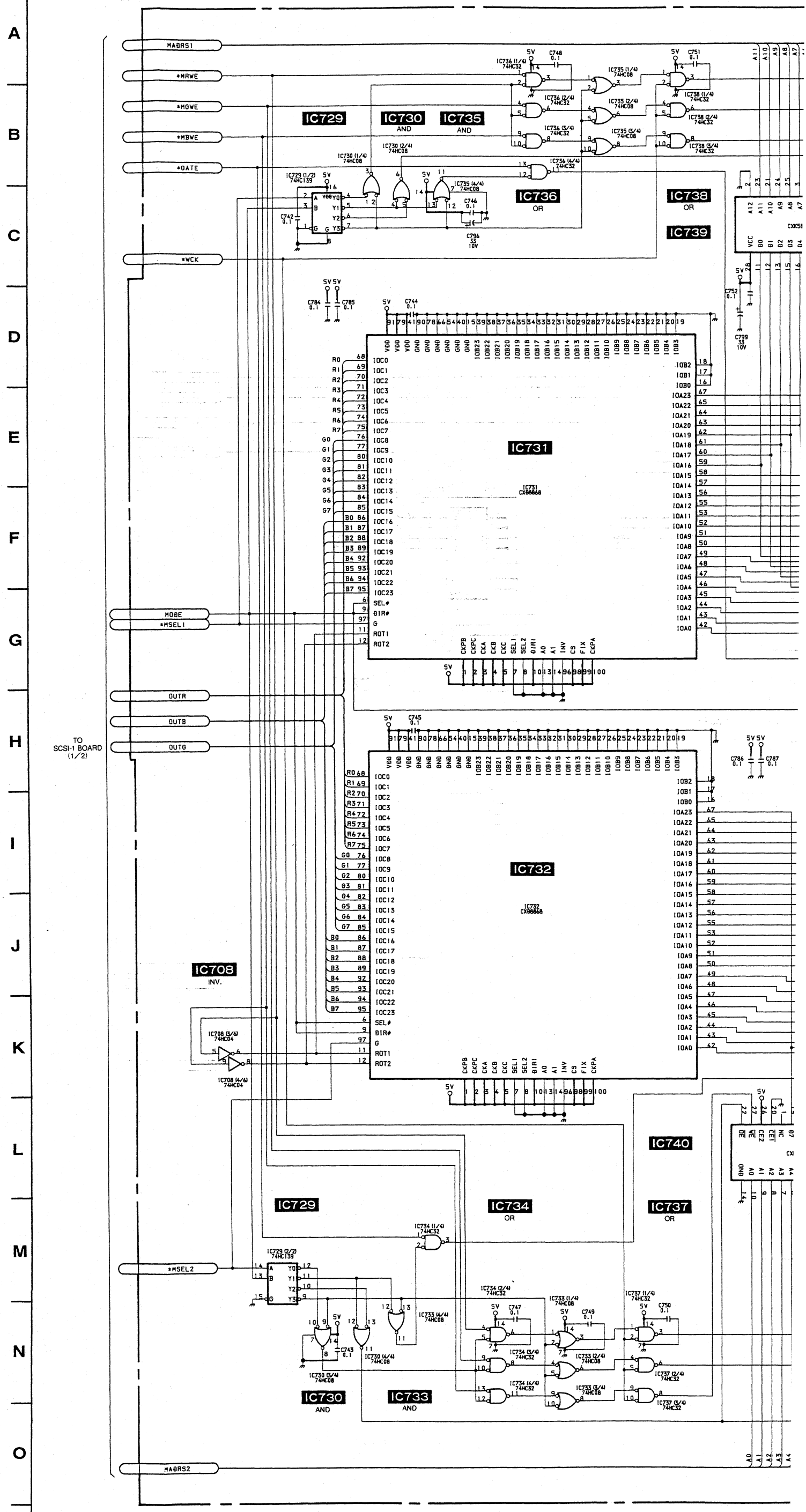
IC703
OR

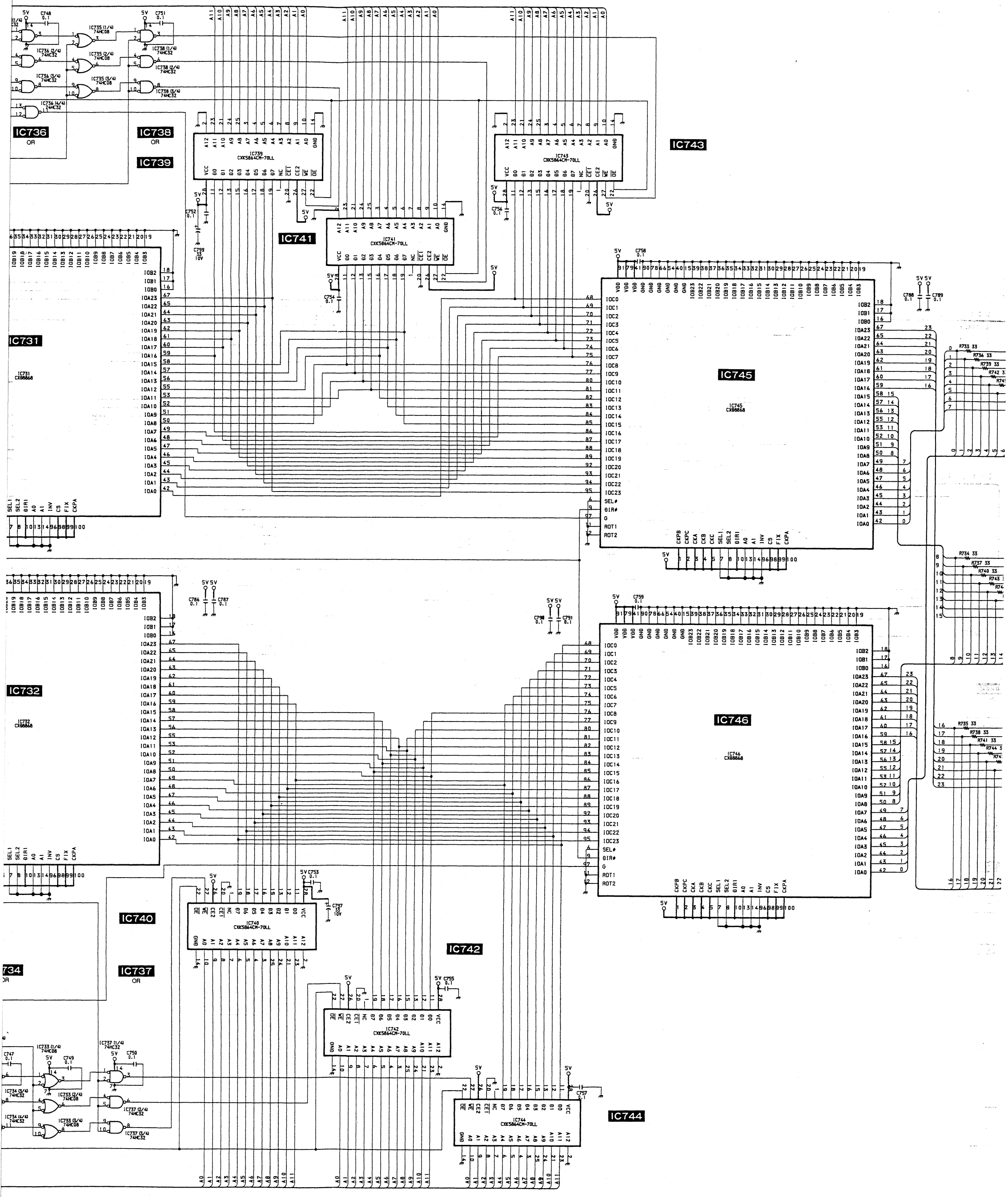
4 5 6 7 8 9 10 11 12 13 14 15

I SCSI) (1/2)

IC704 CXB1185CQ
IC706 H86433228A69F
IC721 CX088690
IC710 F.F
IC713 F.F
IC718 SWITCH
IC714 SWITCH
IC712 OR
IC709 IC712 OR IC711 INV.
IC717 OR
IC723 IC724 IC725
IC720 SWITCH
IC703 OR
IC701
IC708 INV.
IC711 INV.
IC717 OR
IC705 AND
IC703 OR
IC702 INV.
IC716
IC719
IC707 BUFFER
IC715
IC708 INV. IC703 OR


16
17
18
19
20
21
MOBE
OUTR
OUTG
OUTB
D0
D1
D2
D3
D4
D5
D6
D7
*MRWE
*MGWE
*MBWE
MA0RS1
*WCK
MA0RS2
IC726 74HC161
5V
C737 0.1
IC726
IC727 74HC161
C738 0.1
IC727
IC728 74HC161
C739 0.1
IC728
A0
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
TO SCSI-1 BOARD (2/2)
IC713 (2/2) 74HC74
*MSEL1
*MSEL2
IC713
F.F
*GATE
C736 0.1
IC705 (2/4) 74HC08
IC705 (3/4) 74HC08
IC705 (4/4) 74HC08
C740 0.1
IC708 (5/6) 74HC04
IC708 (6/6) 74HC04
IC701 (6/6) 74HC14
C741 0.1
IC703 (3/4) 74HC32
IC737 (4/4) 74HC32
IC738 (4/4) 74HC32


1 2 3 4 5 6 7 8
A B C D E F G H I J K L M N O
MA0RS1
*MRWE
*MGWE
*MBWE
*GATE
*WCK
MODE
*MSEL1
OUTR
OUTB
OUTG
TO SCSI-1 BOARD (1/2)
MA0RS2
*MSEL2
IC729
IC730 AND
IC735 AND
IC736 OR
IC738 OR
IC739
IC731
IC732
IC708 INV.
IC740
IC734 OR
IC737 OR
IC733 AND
IC730 AND
5V
VCC
GND


IC731
IC732
IC733 (1/4) 74HC08
IC733 (2/4) 74HC08
IC733 (3/4) 74HC08
IC734 (4/4) 74HC32
IC735 (1/4) 74HC08
IC735 (2/4) 74HC08
IC735 (3/4) 74HC08
IC736 (4/4) 74HC32
IC736 OR
IC737 (1/4) 74HC32
IC737 (2/4) 74HC32
IC737 (3/4) 74HC32
IC737 OR
IC738 (1/4) 74HC32
IC738 (2/4) 74HC32
IC738 (3/4) 74HC32
IC738 OR
IC739
IC740
IC741
IC742
IC743
IC744
IC745
IC746
CXK5864CM-70LL
CXK5864CM-70LL
IC731 CX98868
IC732 CX98868
IC744 CX98868
IC745 CX98868
SEL1 SEL2 DIR1 A0 A1 INV CS FIX CKPA
CKPB CKPC CKA CKB CKC SEL1 SEL2 DIR1 A0 A1 INV CS FIX CKPA
SEL# DIR# G ROT1 ROT2
IOA0 IOA1 IOA2 IOA3 IOA4 IOA5 IOA6 IOA7 IOA8 IOA9 IOA10 IOA11 IOA12 IOA13 IOA14 IOA15 IOA16 IOA17 IOA18 IOA19 IOA20 IOA21 IOA22 IOA23
IOB0 IOB1 IOB2 IOB3 IOB4 IOB5 IOB6 IOB7 IOB8 IOB9 IOB10 IOB11 IOB12 IOB13 IOB14 IOB15 IOB16 IOB17 IOB18 IOB19 IOB20 IOB21 IOB22 IOB23
IOC0 IOC1 IOC2 IOC3 IOC4 IOC5 IOC6 IOC7 IOC8 IOC9 IOC10 IOC11 IOC12 IOC13 IOC14 IOC15 IOC16 IOC17 IOC18 IOC19 IOC20 IOC21 IOC22 IOC23
R733 33
R734 33
R735 33
R736 33
R737 33
R738 33
R739 33
R740 33
R741 33
R742 33
R743 33
R744 33
R745 33
C747 0.1
C748 0.1
C749 0.1
C750 0.1
C751 0.1
C752 0.1
C753 0.1
C754 0.1
C755 0.1
C756 0.1
C757 0.1
C758 0.1
C759 0.1
C786 0.1
C787 0.1
C788 0.1
C789 0.1
C790 0.1
C791 0.1
C799 33 10V
5V

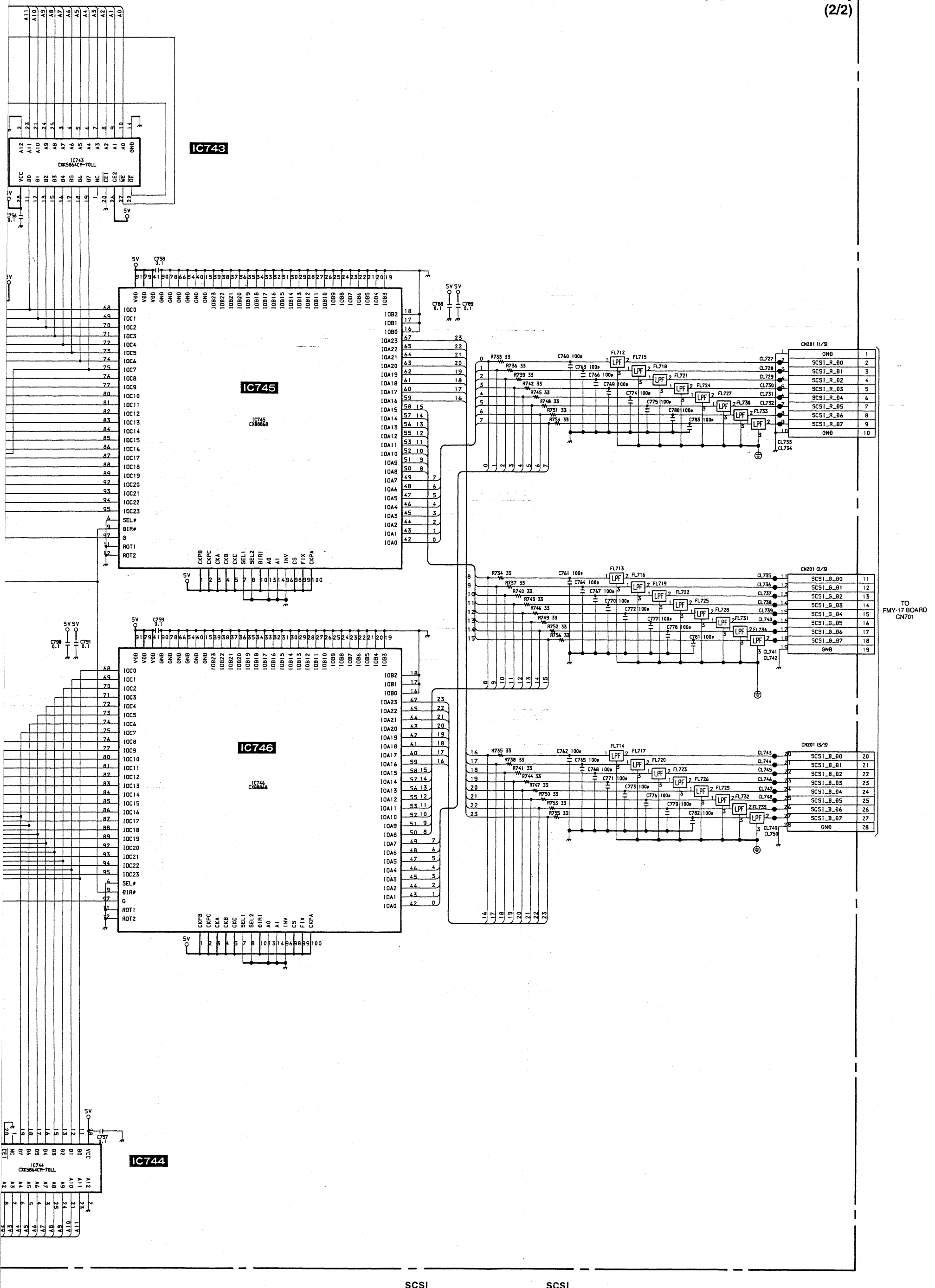
2 3 4 5 6 7 8 9 10 11 12 13

MA0RS1
*MRWE
*MGWE
*MBWE
*GATE
*WCK
MO8E
*MSEL1
OUTR
OUTB
OUTG
*MSEL2
MA0RS2

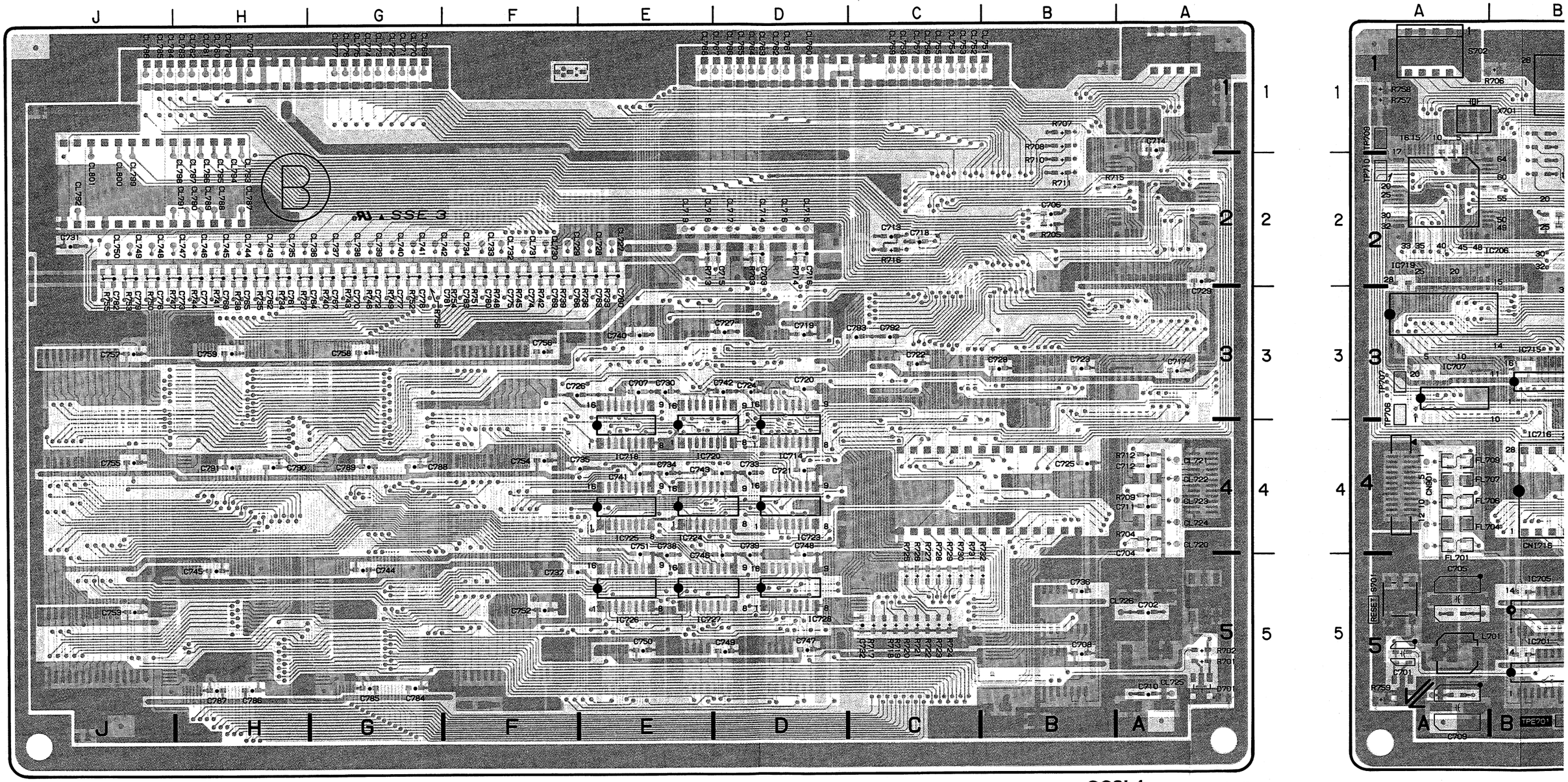
IC729
IC730 AND
IC735 AND
IC736 OR
IC738 OR
IC739
IC741
IC731
IC732
IC708 INV.
IC740
IC742
IC744
IC729
IC734 OR
IC737 OR
IC730 AND
IC733 AND

IC731 CX80868
IC732 CX80868
IC739 CXK5864CM-70LL
IC741 CXK5864CM-70LL
IC743 CXK5864CM-70LL
IC740 CXK5864CM-70LL
IC742 CXK5864CM-70LL
IC744 CXK5864CM-70LL

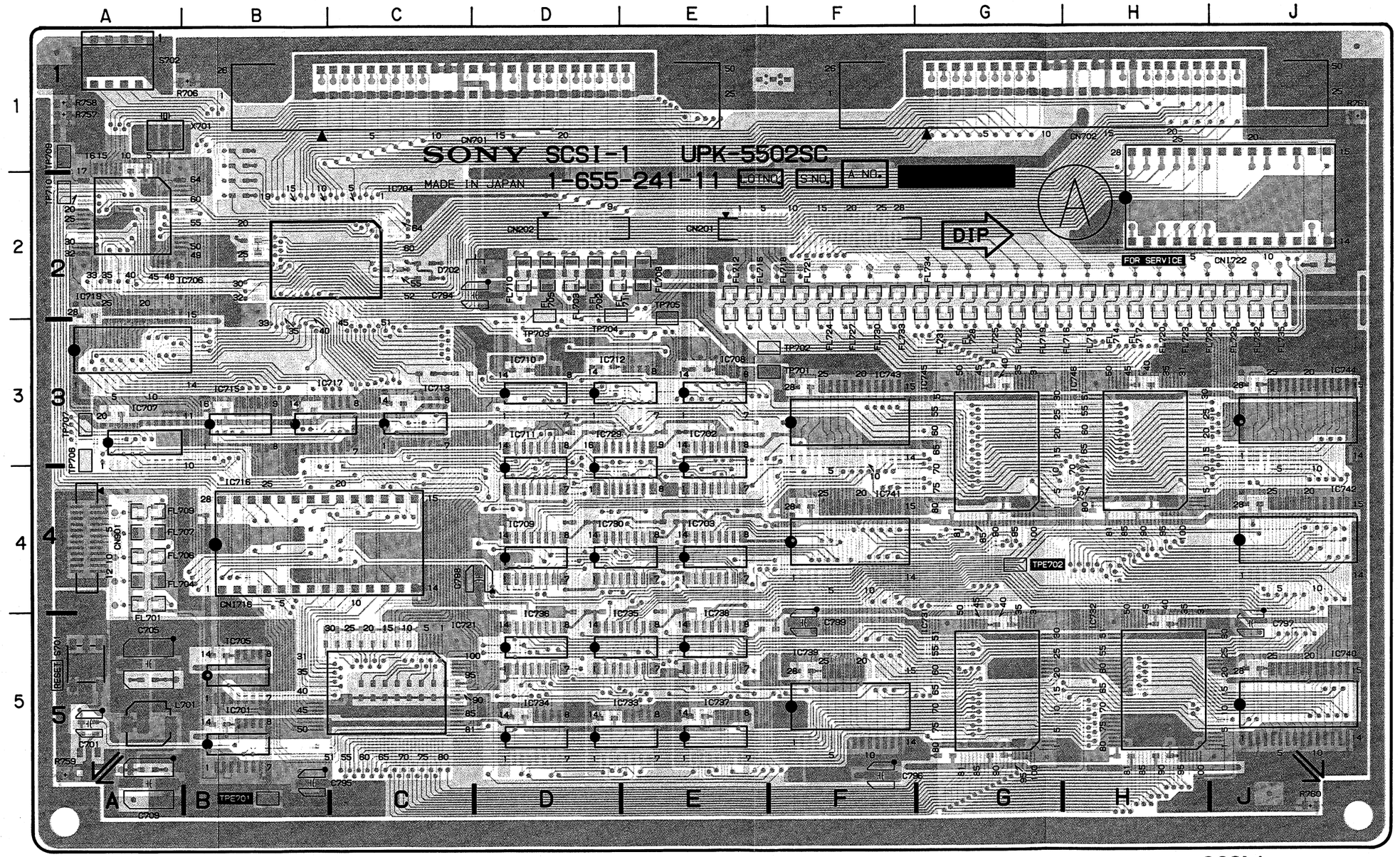
UPK-5502SC (Option Board SCSI) (2/2)



SCSI-1 (SCSI)



SCSI-1 -SOLDERING SIDE-
1-655-241-11



SCSI-1 -COMPONENT SIDE-
1-655-241-11

SECTION 4
ELECTRICAL PARTS LIST

NOTE:
- Items marked "O" in the SP column are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise stated.

When indicating part by reference number, please include the board name.

RESISTORS
- All resistors are in ohms.
- F:non-flammable

CAPACITORS
- MF: μF, PF: μμF

COILS
- MMH: mH, UH: μH

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

SCSI-1 BOARD

Ref. No. or Q'ty	Part No.	SP	Description
			<CAPACITOR>
C701	1-126-394-11	s	ELECT, CHIP 10uF 20% 16V
C702	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C703	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C704	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C705	1-128-397-21	s	ELECT 100uF 20% 16V
C706	1-163-275-11	s	CERAMIC 0.001uF 5% 50V
C707	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C708	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C709	1-128-397-21	s	ELECT 100uF 20% 16V
C710	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C711	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C712	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C713	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C714	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C715	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C716	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C717	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C718	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C719	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C720	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C721	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C722	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C723	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C724	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C725	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C726	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C727	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C728	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C729	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C730	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C731	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C732	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C733	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C734	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C735	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C736	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C737	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C738	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C739	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C740	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C741	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C742	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

(SCSI-1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C743	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C744	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C745	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C746	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C747	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C748	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C749	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C750	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C751	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C752	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C753	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C754	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C755	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C756	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C757	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C758	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C759	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C760	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C761	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C762	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C763	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C764	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C765	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C766	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C767	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C768	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C769	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C770	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C771	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C772	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C773	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C774	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C775	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C776	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C777	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C778	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C779	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C780	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C781	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C782	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C783	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C784	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C785	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C786	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C787	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V

(SCSI-1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C788	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C789	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C790	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C791	1-163-038-00	s	CERAMIC, CHIP 0.1uF 25V
C792	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C793	1-163-125-00	s	CERAMIC, CHIP 220PF 5% 50V
C794	1-104-608-11	s	ELECT 33uF 20% 6.3V
C795	1-104-608-11	s	ELECT 33uF 20% 6.3V
C796	1-104-608-11	s	ELECT 33uF 20% 6.3V
C797	1-104-608-11	s	ELECT 33uF 20% 6.3V
C798	1-104-608-11	s	ELECT 33uF 20% 6.3V
C799	1-104-608-11	s	ELECT 33uF 20% 6.3V
			<CONNECTOR>
CN201	1-770-298-21	o	HOUSING, 28P
CN202	1-770-296-21	o	HOUSING, 9P
CN701	1-770-210-11	o	RECEPTACLE, ANPHENOL 50P
CN702	1-770-210-11	o	RECEPTACLE, ANPHENOL 50P
CN901	1-770-297-21	o	HOUSING, 12P
CNI716	1-526-659-00	o	SOCKET, IC 28P
CNI722	1-526-659-00	o	SOCKET, IC 28P
			<DIODE>
D701	8-719-975-33	s	DIODE RB110C
D702	8-719-975-33	s	DIODE RB110C
			<FILTER>
FL701	1-236-736-11	s	FILTER, EMI
FL702	1-236-736-11	s	FILTER, EMI
FL703	1-236-736-11	s	FILTER, EMI
FL704	1-236-736-11	s	FILTER, EMI
FL705	1-236-736-11	s	FILTER, EMI
FL706	1-236-736-11	s	FILTER, EMI
FL707	1-236-736-11	s	FILTER, EMI
FL708	1-236-736-11	s	FILTER, EMI
FL709	1-236-736-11	s	FILTER, EMI
FL710	1-236-736-11	s	FILTER, EMI
FL711	1-236-736-11	s	FILTER, EMI
FL712	1-236-736-11	s	FILTER, EMI
FL713	1-236-736-11	s	FILTER, EMI
FL714	1-236-736-11	s	FILTER, EMI
FL715	1-236-736-11	s	FILTER, EMI
FL716	1-236-736-11	s	FILTER, EMI
FL717	1-236-736-11	s	FILTER, EMI
FL718	1-236-736-11	s	FILTER, EMI
FL719	1-236-736-11	s	FILTER, EMI
FL720	1-236-736-11	s	FILTER, EMI
FL721	1-236-736-11	s	FILTER, EMI
FL722	1-236-736-11	s	FILTER, EMI
FL723	1-236-736-11	s	FILTER, EMI
FL724	1-236-736-11	s	FILTER, EMI
FL725	1-236-736-11	s	FILTER, EMI
FL726	1-236-736-11	s	FILTER, EMI
FL727	1-236-736-11	s	FILTER, EMI
FL728	1-236-736-11	s	FILTER, EMI
FL729	1-236-736-11	s	FILTER, EMI
FL730	1-236-736-11	s	FILTER, EMI
FL731	1-236-736-11	s	FILTER, EMI
FL732	1-236-736-11	s	FILTER, EMI

(SCSI-1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
FL733	1-236-736-11	s	FILTER, EMI
FL734	1-236-736-11	s	FILTER, EMI
FL735	1-236-736-11	s	FILTER, EMI
			<IC>
IC701	8-759-925-80	s	IC SN74HC14NS
IC702	8-759-925-80	s	IC SN74HC14NS
IC703	8-759-925-85	s	IC SN74HC32ANS
IC704	8-752-356-36	s	IC CXD1185CQ
IC705	8-759-925-76	s	IC SN74HC08NS
IC706	8-759-327-83	s	IC HD6433228A69F
IC707	8-759-926-48	s	IC SN74HC244ANS
IC708	8-759-925-74	s	IC SN74HC04ANS
IC709	8-759-926-24	s	IC SN74HC164ANS
IC710	8-759-329-74	s	IC SN74LS74ANS-E05
IC711	8-759-925-74	s	IC SN74HC04ANS
IC712	8-759-925-85	s	IC SN74HC32ANS
IC713	8-759-925-90	s	IC SN74HC74ANS
IC714	8-759-270-28	s	IC SN74HC257ANS-E05
IC715	8-759-926-11	s	IC SN74HC138ANS
IC716	8-759-330-23	o	IC MX27C512-SCSIV1.0
IC717	8-759-925-85	s	IC SN74HC32ANS
IC718	8-759-270-28	s	IC SN74HC257ANS-E05
IC719	8-752-328-25	s	IC CXK5864BM-70LL
IC720	8-759-270-28	s	IC SN74HC257ANS-E05
IC721	8-759-194-80	s	IC CXD8869Q
IC723	8-759-926-21	s	IC SN74HC161ANS
IC724	8-759-926-21	s	IC SN74HC161ANS
IC725	8-759-926-21	s	IC SN74HC161ANS
IC726	8-759-926-21	s	IC SN74HC161ANS
IC727	8-759-926-21	s	IC SN74HC161ANS
IC728	8-759-926-21	s	IC SN74HC161ANS
IC729	8-759-926-12	s	IC SN74HC139ANS
IC730	8-759-925-76	s	IC SN74HC08NS
IC731	8-759-193-17	s	IC CXD8868Q
IC732	8-759-193-17	s	IC CXD8868Q
IC733	8-759-925-76	s	IC SN74HC08NS
IC734	8-759-925-85	s	IC SN74HC32ANS
IC735	8-759-925-76	s	IC SN74HC08NS
IC736	8-759-925-85	s	IC SN74HC32ANS
IC737	8-759-925-85	s	IC SN74HC32ANS
IC738	8-759-925-85	s	IC SN74HC32ANS
IC739	8-752-328-25	s	IC CXK5864BM-70LL
IC740	8-752-328-25	s	IC CXK5864BM-70LL
IC741	8-752-328-25	s	IC CXK5864BM-70LL
IC742	8-752-328-25	s	IC CXK5864BM-70LL
IC743	8-752-328-25	s	IC CXK5864BM-70LL
IC744	8-752-328-25	s	IC CXK5864BM-70LL
IC745	8-759-193-17	s	IC CXD8868Q
IC746	8-759-193-17	s	IC CXD8868Q
			<COIL>
L701	1-424-653-11	s	COIL, CHOKE 10uH
			<RESISTOR>
R701	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R702	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R703	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R704	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R705	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W

(SCSI-1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R706	1-2		
R707	1-2		
R708	1-2		
R709	1-2		
R710	1-2		
R711	1-2		
R712	1-2		
R713	1-2		
R714	1-2		
R715	1-2		
R716	1-2		
R717	1-2		
R718	1-2		
R719	1-2		
R720	1-2		
R721	1-2		
R722	1-2		
R723	1-2		
R724	1-2		
R725	1-2		
R726	1-2		
R727	1-2		
R728	1-2		
R729	1-2		
R730	1-2		
R731	1-2		
R732	1-2		
R733	1-2		
R734	1-2		
R735	1-2		
R736	1-2		
R737	1-2		
R738	1-2		
R739	1-2		
R740	1-2		
R741	1-2		
R742	1-2		
R743	1-2		
R744	1-2		
R745	1-2		
R746	1-2		
R747	1-2		
R748	1-2		
R749	1-2		
R750	1-2		
R751	1-2		
R752	1-2		
R753	1-2		
R754	1-2		
R755	1-2		
R756	1-2		
S701	1-5		
S702	1-5		
X701	1-7		

I-1 BOARD)

No. / ty	Part No.	SP	Description
13	1-236-736-11	s	FILTER, EMI
14	1-236-736-11	s	FILTER, EMI
15	1-236-736-11	s	FILTER, EMI
			<IC>
1	8-759-925-80	s	IC SN74HC14NS
2	8-759-925-80	s	IC SN74HC14NS
3	8-759-925-85	s	IC SN74HC32ANS
4	8-752-356-36	s	IC CXD1185CQ
5	8-759-925-76	s	IC SN74HC08NS
6	8-759-327-83	s	IC HD6433228A69F
7	8-759-926-48	s	IC SN74HC244ANS
8	8-759-925-74	s	IC SN74HC04ANS
9	8-759-926-24	s	IC SN74HC164ANS
0	8-759-329-74	s	IC SN74LS74ANS-E05
1	8-759-925-74	s	IC SN74HC04ANS
2	8-759-925-85	s	IC SN74HC32ANS
3	8-759-925-90	s	IC SN74HC74ANS
4	8-759-270-28	s	IC SN74HC257ANS-E05
5	8-759-926-11	s	IC SN74HC138ANS
6	8-759-330-23	o	IC MX27C512-SCSIV1.0
7	8-759-925-85	s	IC SN74HC32ANS
8	8-759-270-28	s	IC SN74HC257ANS-E05
9	8-752-328-25	s	IC CXK5864BM-70LL
0	8-759-270-28	s	IC SN74HC257ANS-E05
1	8-759-194-80	s	IC CXD8869Q
3	8-759-926-21	s	IC SN74HC161ANS
4	8-759-926-21	s	IC SN74HC161ANS
5	8-759-926-21	s	IC SN74HC161ANS
6	8-759-926-21	s	IC SN74HC161ANS
7	8-759-926-21	s	IC SN74HC161ANS
8	8-759-926-21	s	IC SN74HC161ANS
9	8-759-926-12	s	IC SN74HC139ANS
0	8-759-925-76	s	IC SN74HC08NS
1	8-759-193-17	s	IC CXD8868Q
2	8-759-193-17	s	IC CXD8868Q
3	8-759-925-76	s	IC SN74HC08NS
4	8-759-925-85	s	IC SN74HC32ANS
5	8-759-925-76	s	IC SN74HC08NS
6	8-759-925-85	s	IC SN74HC32ANS
7	8-759-925-85	s	IC SN74HC32ANS
8	8-759-925-85	s	IC SN74HC32ANS
9	8-752-328-25	s	IC CXK5864BM-70LL
0	8-752-328-25	s	IC CXK5864BM-70LL
1	8-752-328-25	s	IC CXK5864BM-70LL
2	8-752-328-25	s	IC CXK5864BM-70LL
3	8-752-328-25	s	IC CXK5864BM-70LL
4	8-752-328-25	s	IC CXK5864BM-70LL
5	8-759-193-17	s	IC CXD8868Q
6	8-759-193-17	s	IC CXD8868Q
			<COIL>
	1-424-653-11	s	COIL, CHOKE 10uH
			<RESISTOR>
	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
	1-216-097-00	s	METAL, CHIP 100K 5% 1/10W

(SCSI-1 BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R706	1-216-295-00	s	METAL, CHIP 0 5% 1/10W
R707	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R708	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R709	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R710	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R711	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R712	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R713	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R714	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R715	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R716	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R717	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R718	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R719	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R720	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R721	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R722	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R723	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R724	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R725	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R726	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R727	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R728	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R729	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R730	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R731	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R732	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R733	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R734	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R735	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R736	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R737	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R738	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R739	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R740	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R741	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R742	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R743	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R744	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R745	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R746	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R747	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R748	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R749	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R750	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R751	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R752	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R753	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R754	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R755	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
R756	1-216-013-00	s	METAL, CHIP 33 5% 1/10W
			<SWITCH>
S701	1-570-909-11	s	SWITCH, TACTIL (REFLOW TYPE)
S702	1-571-780-11	s	SWITCH, DIP (4 KEY)
			<CERAMIC VIBRATOR>
X701	1-760-606-21	s	VIBRATOR, CERAMIC

FRAME

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-769-485-11	s	CORD, CONNECTION (28 CORE)
1pc	1-769-492-11	s	CORD, CONNECTION (12 CORE)
1pc	1-769-494-11	s	CORD, CONNECTION (9 CORE)

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP	Description
1pc	1-568-415-21	s	TERMINAL 50P
1pc	3-704-046-31	s	BAG, PREVENTION, ELECTRIFICATION
1pc	3-759-922-11	s	MANUAL, INSTRUCTION
2pcs	7-685-871-01	s	SCREW +BVTT 3X6 (S)